

**REPORT OF THE COMMITTEE OF EXPERTS**  
**ON**  
**UNEMPLOYMENT ESTIMATES**



**PLANNING COMMISSION**  
**GOVERNMENT OF INDIA**

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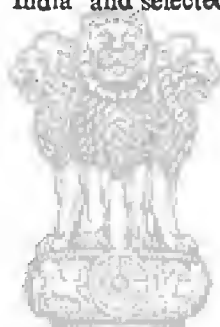
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## INTRODUCTION

The Planning Commission set up a Committee of Experts on Unemployment Estimates under its Resolution No. L & E (E) 12-7/68, dated August 19, 1968 to "go into the estimates of unemployment worked out for the previous Plans and the data and methodology used in arriving at them and advise the Planning Commission on the various issues connected therewith, in particular, the alternative methods of analysis, computation and presentation that may be adopted for the Fourth Five-Year Plan (1969-74) in the ten year perspective of 1969-79." The Committee consisted of :—

1. Prof. M.L. Dantwala, University of Bombay, Bombay .. Chairman
2. Prof. K. N. Raj, University of Delhi, Delhi .. Member
3. Prof. D.B. Lahiri, Indian Statistical Institute, Calcutta .. Member

2. In pursuance of the suggestion made at the meeting of the Committee held on December 8, 1968, the following experts were appointed as Technical Consultants to the Committee :—

1. Dr. P.M. Visaria, University of Bombay, Bombay.
2. Shri J. Krishnamurty, University of Delhi, Delhi.
3. Shri Sudhir Bhattacharyya, Indian Statistical Institute, Calcutta.

3. The Committee was asked to consider the following issues :—

“(1) *Concepts* :

In the rural areas, the concept of unemployment, as the term is usually understood, is not applicable and the method of working out 'equivalent full time unemployment' from such data as may be available about the number of man-hours worked in a year is, as Prof. Mahalanobis himself admitted, arbitrary and not of the slightest value in making policy or administrative decisions. What is to be done ?

“(2) *Methods of direct estimation of Unemployment* :—

These methods are essentially based (a) for the urban areas on the Employment Exchange data and (b) for the rural areas on the National Sample Survey

(NSS) data of the 16th Round done in 1960-61. The limitations of Employment Exchange data as indicators of unemployment arise from (i) some persons already employed registering themselves, (ii) some persons not employed not registering themselves, (iii) some persons registering themselves at more than one Employment Exchange, and (iv) some persons from rural areas registering themselves at the exchanges. The limitations for the rural areas are even more serious because the latest available NSS data relate only to 1960-61 and the estimates of rural unemployment for subsequent years are based on the assumption that the proportions of unemployed in the rural population would be the same (i.e., 1.6 per cent) as in 1960-61. There is no means to verify the validity of this assumption.

"Because of the reasons set out above, the estimation of base year unemployment for a five year plan, or 'backlog' as it is called, is subject to serious limitation. Shall we continue to use the Employment Exchange and NSS data and if so, what corrective factors, if any, shall we apply ?

*"(3) Method of indirect estimation of Unemployment—*

This method consists in taking a previous direct estimation of unemployment in 1950-51 [subject to the limitation mentioned in (2) above] and adding to it the difference between the entrants to labour force in a five year period and the employment generated as estimated on the basis of investment made in public and private sectors by the use of sectoral investment-employment 'norms' or 'coefficients'. The number of entrants to labour force is computed on the basis of population data for age-groups and the participation rate for males and females as indicated by the latest population census returns. The estimation of employment generated takes the investment-employment norms for sectors or activities for which investment data are available and then makes an overall addition of about 50 per cent for the indirect employment. The result all along has been an increase in the figure of 'backlog.'

"Was the base figure of backlog in 1950-51 of 3.5 million, reliable or acceptable ? Is the present method of estimating entrants to labour force scientifically valid ? Is the present method of estimating employment generated in a five year period correct ?

"(4) If both the direct and indirect methods of estimation of unemployment are deficient and subject to limitations do we now state clearly that 'backlog' estimates of the past were exceedingly rough and need not be relied upon as a kind of overall guide to policy and action ? What other method of analysis and presentation shall we adopt ?"

4. The Committee held meetings in Delhi and Bombay from time to time. Some of the members and technical consultants had discussions with the Directorate General of Employment and Training, the Indian Statistical Institute, the Central Statistical Organisation, the Office of the Registrar General and the Institute of Applied Manpower Research.

5. The Committee received very valuable technical assistance from Dr. P.M. Visaria, Shri Sudhir Bhattacharya and Shri J. Krishnamurty. The time and attention they devoted to the work of the Committee far surpassed what could reasonably be expected from honorary consultants. The notes prepared by them



have been included in the Report as Appendices . We wish to place on record our appreciation and thanks for their cooperation.

6. Shri K.V. Iyer, Joint Director, Labour and Employment Division of the Planning Commission and his colleagues, Shri N.R. Ramasubramanian, Shri M.K. Ghosal, and Shri S. Fasihuddin provided not only secretarial assistance but also technical help on many important issues. We wish to record our appreciation of the same.

NEW DELHI,  
March 27, 1970.

M.L. DANTWALA, CHAIRMAN  
K.N. RAJ, MEMBER  
D. B. LAHIRI, MEMBER.



## CHAPTER I

### PLANNING COMMISSION'S ESTIMATES OF UNEMPLOYMENT AND EMPLOYMENT GENERATION : AN OUTLINE

ACCORDING to the terms of reference of the Committee it is to "go into the estimates of unemployment worked out for the previous Plans and the data and methodology used in arriving at them and advise the Planning Commission on the various issues connected therewith, in particular, the alternative methods of analysis, computation and presentation that may be adopted for the Fourth Five Year Plan (1969—74) in the ten-year perspective of 1969—79."

1.2. In this chapter, we propose to review briefly the estimates of unemployment, presented by the Planning Commission in the various documents. This review is necessary because the changes or revisions made in these estimates at different times have not been documented in a single comprehensive study. We recognise that in the summary statements presented below we might have overlooked at times the qualifications and cautions which accompanied the relevant discussion in the Planning Commission's documents.

1.3. The review below is confined to the Planning Commission's estimates and the methodology adopted in successive Plans for calculating :

- (a) the backlog of unemployment or the number of persons unemployed at the beginning of the Plan ;
- (b) the net additions to the labour force during the Plan period ;
- (c) the employment potential or the number of jobs likely to be generated through the implementation of the Plan as formulated ; and
- (d) the employment generated or achievements in terms of employment on the basis of the actual Plan performance.

#### *First Plan (1951—56)*

1.4. At the time of the formulation of the First Plan, there were hardly any statistical data on employment and unemployment except the Employment Exchange statistics limited to a few towns and major cities. No estimates of unemployment in the economy as a whole were therefore attempted in the First Five-Year Plan. It was stated that

"...the extent of unemployment in rural areas is difficult to estimate. Some authorities put the figure at 30 per cent ; but in addition to this, there is chronic underemployment. The quantitative estimates of this are even more difficult to work out."

No estimates were offered either of the growth of the labour force during the Plan period.

1.5. Some indication was however given of the extent of educated unemployment on the basis of Employment Exchange data. The likely impact of the Plan on the employment situation was also estimated separately for some sectors. For some organized industries, the estimate was based on the information collected from employers' organisations about their future labour requirements. The wage component of the proposed investment in roads and major irrigation and power projects, and the output targets set in the mining sector taken along with available data on output per worker in mining, formed the basis of the estimates for these sectors. Similarly, for cottage and small scale industries the available data on investment or output per worker, taken together with the investment and/or output targets for these industries, were used for making some estimates. For building and construction activities, the estimate was based, *inter alia* on the number of man-days required to build a house of certain specifications. The quantum of additional full-time employment in agriculture was estimated from the additional area to be brought

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<sup>1</sup>First Five Year Plan, p. 652, para 5.

under irrigation and land reclamation schemes. The employment likely to be generated through "local works" and in the tertiary sector in general could not be quantified.<sup>3</sup>

1.6. The direct non-agricultural employment generated during the First Plan period was estimated at 4.5 million.<sup>4</sup> This was exclusive of employment in trade, commerce, etc., which was later estimated at 1 million.<sup>4</sup> Thus the employment achievement of the First Plan outside agriculture was reckoned at 5.5 million.

#### *Second Five Year Plan (1956—61)*

1.7. The Second Five-Year Plan furnished fairly detailed estimates of unemployment for the first time. The backlog of unemployment at the beginning of the Plan was placed at about 5.3 million, 2.8 million in rural areas and 2.5 million in urban areas. Unemployment in rural areas, though difficult to separate from under-employment, was estimated on the basis of the results of the First Agricultural Labour Enquiry (1950-51). It was assumed that, in view of the marked emphasis on agricultural development during the First Plan period, the rural unemployment situation would not have worsened and that "it might be safe to say that the volume of rural unemployment during the operation of the First Plan has not materially changed".<sup>5</sup> Rural unemployment at the beginning of the Second Plan was therefore taken to be of the same order as was presumed to have been revealed by the First Agricultural Labour Enquiry for the year 1950-51. The estimate of urban unemployment was based on the data available from the Live Register of the Employment Exchanges, adjusted in the light of the findings of the Preliminary Survey of Urban Unemployment undertaken by the National Sample Survey (NSS) in 1953 at the suggestion of the Planning Commission. According to this survey, only about 25 per cent of the unemployed persons had registered themselves with the Employment Exchanges; since the number of persons on the Live Register of the Exchanges was about 0.7 million in March, 1956, urban unemployment was estimated at 2.8 million. After allowing for some frictional unemployment the figure of 2.5 million was adopted.<sup>6</sup>

1.8. The net addition to the labour force during the period 1956—61 was originally estimated in the Plan at about 10 million (6.2 million in rural areas and 3.8 million in urban areas). After the Plan was published, the population estimate for 1961 was revised upwards to 420 million from the earlier estimate of 408 million. The estimate of growth in the labour force was also revised from 10 million to 11.7 million. The revised labour force estimate was based on the assumption that 90 per cent of the males, and 36 per cent of the females, in the age-group 15—59 would participate in productive activity and constitute the labour force. (The rate for females was based on the rate of "participation of females in the labour force in 1951", derived from the 1951 Census).<sup>7</sup>

1.9. The additional employment likely to be generated during the Second Plan period was estimated at about 10 million, 8 million in the non-agricultural sector and 196 million in agriculture. The figure for the non-agricultural sector was based on the identification of three components and quantification of the likely increase in employment in each of them. The three components were: (a) employment in "construction" (2.1 million), (b) "continuing non-agricultural employment" (3.1 million), and (c) "indirect employment in trade, commerce, etc." (which was estimated, on the basis of the occupational pattern observed in the Population Census of 1951, at 52 per cent of the increase in employment in construction and "continuing non-agricultural employment").<sup>8</sup> The estimates for construction and "continuing non-agricultural employment"

<sup>3</sup>*Ibid.*, pp. 653—55.

<sup>4</sup>Second Five Year Plan, p. 119, para 13.

<sup>5</sup>Outlook on Employment and Related Papers (A Joint Study by the Directorate General of Resettlement and Employment, Ministry of Labour and Employment, and Labour and Employment Division, Planning Commission, 1959, p. 6).

<sup>6</sup>Second Five Year Plan, p. 111, para 6.

<sup>7</sup>Second Five Year Plan, p. 110

<sup>8</sup>Outlook on Employment and Related Papers, op. cit., page 5.

<sup>9</sup>Additional employment in "construction" referred to that directly associated with the construction component of the increases in investment in the economy; "continuing non-agricultural employment" was identified with the employment "in the continuing phase, i.e. as a result of the operation and maintenance of assets created during the process of construction"; and "indirect employment in trade, commerce, etc." with all the other services not covered above.

were based on (i) the data supplied by State Governments and Central Ministries, and (ii) the physical or financial targets indicated in the Plan for public and private sectors, after making adjustments for rise in prices and assumed changes in productivity.

1.10. The estimate of additional employment in agriculture (1.6 million) referred apparently only to employment "on a full-time basis according to rural standards". The basis of the estimate will be evident from the following extract :

"...of the 10 million new entrants to the labour force a large number will be among families depending on land. In regard to such persons, as has been pointed out earlier, the quantum of additional work has to be measured not in terms of jobs, but in the form of additional income accruing to them. Further, on account of irrigation provided during the Plan period, it is reasonable to assume that of the additional acreage irrigated, a part will provide opportunities of work on a full-time basis according to rural standards. There are also allied schemes of reclamation of land by manual labour, schemes of Central Tractor Organisation, etc., and expansion and development schemes of plantations, pepper and horticulture. These put together are estimated to provide employment to about 1.6 million new entrants to the labour force in rural areas."<sup>9</sup>

1.11. It was recognised that, in addition to such "full-time" employment, there would be significant reduction in under-employment in both the agricultural and non-agricultural sectors. This is evident from the following statement :

"Additional employment likely to be generated over the Second Plan period in sectors other than agriculture is estimated at 8 million. In this estimate only full-time employment has been taken into account. There are in the Plan programmes of development such as irrigation and land reclamation which will reduce under-employment to some extent and may also absorb new persons. In the present socio-economic structure in the rural areas the distribution of a given quantum of work or income cannot be split up as between employment for the under-employed and full-time employment as such. With the increase in agricultural production envisaged in the Plan and the substantial increase in employment opportunities outside agriculture, there will be a significant increase in income and reduction in under-employment in the primary sector. The promotion and reorganisation of village and small-scale industries along the lines suggested in the Plan will provide fuller employment to larger numbers of persons engaged in these industries. Altogether, in aggregate terms, the Plan envisages a sufficient increase in the demand for labour to match the increase in the labour force amounting to 10 million."<sup>10</sup>

1.12. For formulating programmes specially designed to alleviate unemployment among the educated (persons with and above matriculation or equivalent educational achievements), a Study Group on Educated Unemployed was set up by the Planning Commission in 1955. On the basis of the Preliminary Survey of Urban Unemployment, undertaken by the NSS, the Study Group placed the number of educated unemployed in 1956 at 0.55 million. Further it estimated that 1.45 million educated persons would be added to the labour force during 1956—61.

1.13. A review of employment performance in the Second Plan period, as given in the Third Plan document,<sup>11</sup> indicated that additional employment was created during 1956—61 for only about 8 million (6.5 million outside agriculture) as against the earlier estimate of 10 million.<sup>12</sup>

#### *Third Five Year Plan (1961—66)*

1.14. The backlog of unemployment at the beginning of the Third Plan was originally placed at 9 million. This was based on the earlier estimate of unemployment at the beginning of the Second

<sup>9</sup>Second Five Year Plan, p. 118

<sup>10</sup>Second Five Year Plan, Chapter III, p. 75.

<sup>11</sup>Third Five Year Plan, p. 156, para 6.

<sup>12</sup>Second Five Year Plan, pp. 115—118.

Plan (5.3 million), the larger increase in the labour force than was expected (11.7 million instead of 10.0 million), and the estimated shortfall in performance (about 2 million) compared to the earlier prognosis of the additional employment likely to be generated by the Second Plan. It was added that "...underemployment in the sense of those who have some work but are willing to take up additional work cannot be precisely estimated, but is believed to be of the order of 15-18 million."<sup>13</sup>

1.15. Since the 1961 Census data on the age composition of the population and on participation rates were not available at the time the Third Plan document was prepared, the NSS data formed the basis of the "general assumptions" made for estimating the net addition to labour force during the Third Plan period at 17 million.<sup>14</sup> It would also appear from some of the documents on employment prepared in the Planning Commission at the time that the labour force participation rate was expected to rise with the development process. This will be evident from the following extract :

"In 1951, we had a population of about 362 millions and a labour force of 144 millions (102 millions depending on agriculture and 42 millions in the non-agricultural sector). The working force constituted about 40 per cent of the total population. With the stage of development that we might reach in 1976, it would be safe to assume that the labour force participation will increase to 45 per cent (on the calculations given later we have assumed also a smaller labour force participation amounting to 42.5 per cent)."<sup>15</sup>

1.16. The employment potential of the Third Plan was calculated by the Planning Commission on much the same basis as for the Second Plan. The norms for estimating increases in non-agricultural employment were, however, adjusted for the rise in prices and the assumed increase in productivity. Further, the increase in "indirect employment" was calculated at 56 per cent of the additional direct employment estimated to be generated by developmental programmes outside agriculture (as compared to 52 per cent assumed in the Second Plan). Thus the total employment potential of the Third Plan was estimated at 14 million, 10.5 million outside agriculture and 3.5 million in agriculture. Since the growth in labour force during the Plan period was estimated at 17 million, the expected growth in employment revealed a likely shortfall of about 3 million. (In order to cover this gap, the Third Plan envisaged a massive programme of rural works which was expected to provide 100 days of work in a year to 0.1 million persons in the first year rising to about 2.5 million persons in the last year of the Plan.)

1.17. In the Third Plan also, unemployment among the educated was analysed separately in its two aspects, i.e. the backlog of such unemployment and the addition to the educated labour force. The backlog of the educated unemployed was estimated at about 1 million and the addition to the educated labour force at 3 million during the period 1961-66.<sup>16</sup>

1.18. Later, while assessing the employment performance during the Third Plan period, it was noted that the figure of unemployment at the beginning of the Third Plan needed revision in the light of better and more up-to-date data from the National Sample Survey and the Live Register of the Employment Exchanges. According to the results of the 16th Round of the National Sample Survey (1960-61), about 1.62 per cent of the rural population was unemployed. On this basis, rural unemployment in 1960-61 was placed at 5.8 million. The definition of the rural unemployed used in this Round of the National Sample Survey covered "all persons who, owing to lack of work, had not worked even on a single day during the reference week and were currently available for work". They included "(a) persons seeking work through Employment Exchanges, intermediaries, applications or direct contacts ; and (b) persons not seeking but available for work at current rates of remuneration in prevailing conditions of work". As for urban unemployment, the data relating to the number of persons registered with the Employment Exchanges, after some

<sup>13</sup>Third Five Year Plan, p. 156, para 6.

<sup>14</sup>Ibid. para 7.

<sup>15</sup>Outlook on Employment and Related Papers, op. cit., p. 6.

<sup>16</sup>Third Five Year Plan, p. 166, para 29.

necessary adjustments, yielded a figure of 1.5 million. Thus, the total unemployment in 1960-61 was estimated at around 7 million, instead of 9 million as estimated earlier, and this figure was presented in the Draft Outline of the Fourth Five Year Plan (1966-71) published in August, 1966. It may be noted that the sources of data and the methods of estimation used for estimating the stock of the rural unemployed were in this case wholly different from those used earlier.

1.19. While reviewing the performance of the Third Plan on the employment front, the Draft Outline of the Fourth Five Year Plan (1966-71) indicated also that the additional employment created during the Third Plan period was about 14.5 million, 10.5 million in the non-agricultural sector and 4 million in agriculture. The method used for this revised estimate for the Third Plan was not stated explicitly. We understand that it was the same as that adopted for making the earlier estimates of the employment potential of the Third Plan.

*Fourth Five Year Plan : A Draft Outline (1966-71)*

1.20. The backlog of unemployment at the beginning of the Fourth Plan, i.e. April, 1966, was thus estimated at between 9 and 10 million, i.e. by adding to the revised figure of the backlog at the start of the Third Plan (7 million) the difference between the net addition to the labour force (17 million) and the additional employment generated (14.5 million) during the period 1961-66. Three-fourths of this stock of unemployed (i.e. about 7 million) were believed to be in rural areas.<sup>17</sup>

1.21. We understand that an alternative method of estimation also yielded very nearly the same figure. In the absence of any direct information on rural unemployment after the 16th Round of the NSS, it was assumed that rural unemployment had remained at the same level as reported by the NSS for 1960-61 (i.e. at 1.62 per cent of the rural population). On this basis, the volume of rural unemployment was estimated at 6.3 million. For the urban sector, the available data on the number of persons on the Live Register of the Employment Exchanges were adjusted by using some approximate correction factors for (1) the registration of persons who were in fact employed, (2) registrants resident in rural areas, and (3) incomplete registration of the unemployed. The resulting estimate of urban unemployed was 3 million. Thus taking the rural and urban sectors together, total unemployment in the country according to this method of estimation amounted to 9.3 million.

1.22. For estimating the net additions to the labour force during the Fourth Plan period (1966-71), due account was taken of the labour force participation rates in the age-group 15-59 reported by the Population Census of 1961. The estimates of the likely additions to the labour force did not however take into account the different participation rates for rural and urban areas, since the available population projections did not distinguish between the rural and the urban population. The net additions to the total labour force were estimated at 23 million. Using the norms similar to those adopted for the Third Plan, and with adjustments for price changes and assumed rise in productivity, the employment potential of the Fourth Plan was estimated at 18.5 to 19.0 million (14 million outside agriculture and 4.5 to 5.0 million in agriculture).

1.23. After the publication of the Draft Outline of the Fourth Five Year Plan (1966-71) in 1966, the reliability of the estimates of the additions to employment and of the stock of unemployed was questioned from various quarters. It was pointed out that, in rural areas, not much open unemployment existed, only a high degree of under-employment; and that the estimate of 9-10 million unemployed, of whom about 7 million were thought to be in the rural sector, was therefore very much on the high side if it was additional to the under-employment known to be widely prevalent. On the other side, the view has been put forward that it is not very meaningful in the Indian context to make a sharp distinction between under-employment, if it is severe, and open unemployment; and that the concepts used understate the true magnitude of unemployment. Another criticism has been that the urban unemployment estimates made on the basis of Employment Exchange data suffered from a number of limitations, possibly exaggerating the unemployment situation. Estimates of additional employment expected to be generated by the Five Year Plans have also been criticised as very defective.

*Fourth Five Year Plan : Draft (1969-74)*

1.24. In the Draft of the Fourth Five Year Plan (1969-74) published in March, 1969, no attempt was made to indicate the backlog of unemployment, additions to the labour force, or the employment potential of the plan outlays. The reasons for this were stated as follows :—

“In previous Plans, estimates used to be presented of the backlog of unemployment at the beginning of the Plan period, of the estimated increase in the work-force during the

<sup>17</sup>Fourth Five Year Plan (1966-71), A Draft Outline, p. 106, para 1.

period, and of additional employment likely to be secured through implementation of the Plan as formulated. Excepting the estimate of increase in the work-force which was related to demographic data, the others were admittedly rough estimates. There were inherent difficulties in estimating the employment potential of the vast range of projects and programmes planned during a period. These were accentuated by the uncertainties relating to implementation. An estimate of the total employment created during a Plan period was thus in the nature of a guess. No comprehensive surveys were available of the situation in urban and rural areas at different points of time which would make it possible to check the validity of the estimates made. The estimates carried over from Plan to Plan appeared less and less firmly based. There was also considerable divergence of opinion regarding appropriate definitions of and suitable yardsticks for measuring under-employment and unemployment, urban and rural."<sup>1</sup>

Reference was made to the appointment of the present Committee which was to investigate the various relevant issues.

1.25. Our observations on the methodology and the assumptions underlying the various estimates of the Planning Commission, as presented above, are outlined in the next Chapter.

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<sup>1</sup>*Fourth Five Year Plan (1969—74)—Draft*, pp. 341-42.



## CHAPTER II

## EVALUATION OF THE PLANNING COMMISSION'S METHODOLOGY AND ASSUMPTIONS

It will be evident from Chapter I that, in arriving at the estimates of unemployment, the Planning Commission used two different methods. One which may be described as an indirect method, was based on estimating net additions to the labour force and the "employment potential" of investment and growth in output during the different Plan periods. If the former exceeded the latter in a Plan period—as was usually the case—the difference was added to the backlog of estimated unemployment at the beginning of the period to arrive at estimates of unemployment at the end of it. The second method utilized directly the information regarding unemployment available from National Sample Surveys and from the Employment Exchanges with some adjustments considered necessary. We shall outline the limitations of both these methods.

2.2. The elements involved in the first method of estimation will be evident from the following equation which expresses the relevant relationship :—

Backlog of unemployment at the start of a Plan period.

- (a) Backlog of unemployment at the start of the preceding Plan period *plus*
- (b) Net additions to the labour force during the period *minus*
- (c) Additional employment generated during the period.

Estimates of each of these components for the period of the Second, Third and Fourth Plans, referred to in Chapter I, are summarised in Table I below :

TABLE I  
*Estimates of Unemployment, Net Additions to the Labour Force, "Employment Potential" and Actual Employment Generation presented in Successive Plan Documents*

(Figures in millions)

	Second Plan (1956—61)	Third Plan (1961—66)	Fourth Plan Draft Outline (1966—71)
Unemployed at the start of each Plan	5.3	9.0 (7.0)	9.0 — 10.0
Net additions to the labour force during the Plan period	10.0 (11.7)	17.0	23.0
Employment potential of the Plan—			
(a) Total	10.0	14.0	18.5 — 19.0
(b) Non-Agricultural	8.0	10.5	14.0
(c) Agricultural	2.0	3.5	4.5 — 5.0
Employment generated by the Plan—			
(a) Total	8.0 (10.0)	14.5	..
(b) Non-agricultural	6.5	10.5	..
(c) Agricultural	1.5	4.0	..

(Note : Figures in parentheses show the revised estimates)



### *Importance of the Initial Estimate of the Backlog*

2.3. It is obvious that the estimates of the stock of unemployed as at the end of the Third Plan and at the beginning of the Fourth Plan are affected, among other things, by the assumed unemployment at the start of this series of exercises, i.e. at the start of the Second Plan when this particular procedure was adopted. When the estimates of the unemployed at the start of the Third Plan were revised, the assumption of backlog at the start of the Second Plan was left unchanged and the estimate of the employment generated during the Second Plan was revised upwards by about 2 million to ensure internal consistency of the various estimates.

2.4. As noted earlier, the estimate of rural unemployment in 1956 was said to have been based on the Agricultural Labour Enquiry conducted in 1950-51 and on the further assumption that investment and growth of output during the First Plan period would have absorbed the net additions to the rural labour force that occurred during the period 1951—56. The households covered in the First Agricultural Labour Enquiry were those in which "either the head of the family or 50 per cent or more of the earners reported agricultural labour as their main occupation", the main occupation of a person being one in which he was "engaged for 50 per cent or more of the total number of days worked by him during the previous year". Data on the number of days during which the agricultural adult male labourers were fully employed were collected month to month for a period of one year. However, in doing so "only those labourers were taken into account in any month who reported wage paid employment for at least one day in that month".<sup>1</sup> Thus the data related only to unemployment among male agricultural labourers who had some wage employment during the reference month. One of the reports based on the Enquiry referred to 16 per cent of cultivating labourers being "chronically unemployed".<sup>2</sup> This figure seems to have been used to estimate the unemployed, among male agricultural labourers who numbered approximately 15 million according to 1951 Census. The resulting estimate of unemployed male agricultural labourers was 2.4 million. It was assumed that, among non-agricultural rural workers, the rate of unemployment might be half that found among agricultural labourers; this figure was applied to 4.9 million rural non-agricultural workers to arrive at the number of unemployed non-agricultural rural workers as 0.4 million<sup>3</sup>, and the total number unemployed in the rural sector as 2.8 million.

2.5. It will be seen that in the above method of estimating the rural unemployed, agricultural workers other than wage labourers were wholly excluded. Also the estimate of unemployed non-agricultural rural workers pertained only to the 4.9 million "employees" among "self-supporting" persons according to the 1951 Census, which did not classify "earning dependents" by class of worker. Thus, it was implicitly assumed that the problem of unemployment did not affect the self-employed in the rural population. However, lest it should appear that the estimate of backlog of rural unemployment at the beginning of the Second Plan needs an upward revision, it should be pointed out that during the period when the agricultural labour families surveyed in the Agricultural Labour Enquiry did not report any wage employment, they might have had some work on their own land or in other activities which provided them an opportunity to work as self-employed<sup>4</sup>. Besides, the labourers may have been unable to take up wage employment due to inclement weather, sickness, etc.<sup>5</sup>. Thus, an agricultural labourer who did not report wage employment during a month would not necessarily

<sup>1</sup>Government of India, Ministry of Labour, *Agricultural Labour Enquiry, Report of Intensive Survey of Agricultural Labour: Employment, Under-employment, Wages and Levels of Living*, Vol. I, All India, 1955, p. 199.

<sup>2</sup>B. Ramamurti, *Agricultural Labour, How They Work and Live*, 1954, pp. 13-14

<sup>3</sup>V.K.R.V. Rao, "the Second Five Year Plan: Employment Pattern and Policies" in : Planning Commission, *Papers Relating to the Formulation of the Second Five Year Plan*, New Delhi, 1955, pp. 241-242.

<sup>4</sup>According to some evidence available in the 11th and 12th Rounds (1956-57) of the NSS, in agricultural labour households, 6.06 per cent of the males and 6.87 per cent of the females were unemployed; the corresponding figures for non-agricultural labour households were 1.50 and 0.91 per cent respectively. See: the NSS Report No. 52, *Tables with notes on Employment and Unemployment, 11th and 12th Rounds August 1956, August 1957*, Delhi, 1961, p. 54. Thus the incidence of unemployment among male agricultural labourers was about four times as high as among male non-agricultural labour; the corresponding difference in the case of females was more than seven-fold.

<sup>5</sup>See B. Ramamurti, *op. cit.* page 10, para 2.1. It is important to note that about 50 per cent of the agricultural labour families surveyed in the *Agricultural Labour Enquiry* had some land.

<sup>6</sup>Government of India, Ministry of Labour, *Agricultural Labour Enquiry, Report on Intensive Survey* *op. cit.* p.37

be unemployed throughout the reference month, much less throughout the year. The assumption that the average percentage of labourers without wage employment during the twelve months of the survey period indicated the proportion of chronically unemployed labourers was inaccurate. Also, it implied a conversion of unemployment measured in terms of man-months into the number of unemployed men, a procedure that is highly questionable. Therefore, the estimate of rural unemployment based essentially on the results of the First Agricultural Labour Enquiry was subject to several serious limitations.

2.6. As mentioned earlier in Para 1.7 of Chapter I, the Planning Commission's estimate of the backlog of unemployment in urban India at the start of the Second Plan was based on the data from Employment Exchanges, corrected for non-registration by some of the urban unemployed. The correction factor (the proportion of unemployed among those registered with exchanges) was based on the preliminary survey of urban unemployment undertaken by the NSS in September, 1953. This survey covered only the towns with a population of 50,000 or more according to the 1951 Census and excluded the four big cities of Calcutta, Bombay, Madras and Delhi. The proportion of unemployed registered with Employment Exchanges according to this survey was 27 per cent<sup>1</sup>. The survey of Calcutta city during September 5—December 5, 1953 indicated about 23 per cent of the unemployed to be registered with the Employment Exchanges.<sup>2</sup> We shall comment later on the various limitations of the Employment Exchange data for estimating the volume of urban unemployment.<sup>3</sup> However, at the moment, it should be noted that at the end of March, 1956, there were only 136 Employment Exchanges in the country; and therefore, the statistics on the number of persons on the Live Register of these exchanges did not fully represent the situation prevailing in entire urban India. Also, the adjustments did not allow for the possible rural origin of some of those who were registered with Employment Exchanges. In view of the various reservations noted above, the estimates of the back-log of unemployment in rural and urban India at the start of the Second Plan must be regarded as very rough.

#### *Additions to the Labour Force*

2.7. As mentioned in Paragraph 1.15 of Chapter I, around 1958-59 the view was apparently held in the Planning Commission that the labour force participation rate would tend to rise with the development process. This view was probably based on the post-war Western experience regarding female participation and was supported by the higher labour force participation rates reported by the NSS Rounds than those suggested by the 1951 Census. The 1961 Census also reported higher participation rates than the 1951 Census. The 1961 Census rates were used to estimate the likely addition to the labour force during the Fourth Plan period (1966—71) as 23 million.

2.8. The estimates of labour force derived from the application of participation rates—revealed by the Census or by the NSS—are necessarily influenced by the particular set of definitions adopted. For example, since the 1961 Census participation rates are derived from a very broad definition of workers in seasonal activities, the labour force estimate based on it will include persons who only enter the labour force to meet the peak-season demand for labour (mainly as unpaid family workers) and then withdraw. It would therefore be a mistake to assume—as the Planning Commission has apparently done—that this entire labour force, or additions to it, would need or seek and be available for full-time year-round jobs. Several of them are not in the labour market in the strict sense of the term. They will work on family enterprises if there is work to do; if not, they would continue their other activities in the household. Quite a few in this category might, of course, be persons with grossly inadequate incomes who would therefore welcome suitable opportunities for additional work. All that is sought to be emphasised here is that the problem of this group should not be mixed up with the problem of generating full-time jobs. (In the next chapter we have suggested the type of additional information that should be obtained from employment/unemployment surveys to serve the need of appropriate policy formulation. We also suggest that information on labour force, employment and unemployment should be disaggregated so that those who may need wage or salaried work could be distinguished from those whose preference would be for more work in family enterprises).

2.9. One might mention here the need to take into account not only the net additions to the labour force but also the gross number of entries into and withdrawals from the labour force. Men usually enter into the labour force before the age of 30 and withdrawals take place at older ages. The

<sup>1</sup>The NSS Report No. 8, *Report on Preliminary Survey of Urban Unemployment*, September, 1953, pp. 1-2.

<sup>2</sup>The NSS Report No. 17, *Report on Sample Survey of Employment in Calcutta, 1953*, Delhi, 1959, p. 121.

<sup>3</sup>See paragraphs 2.21—2.26 below; also Chapter IV, paragraphs 4.27—4.30.

job requirements of the entrants into the labour force are different from the vacancies resulting from withdrawals. With a proper use of age-specific participation rates, it should be possible to make separate estimates of entries and withdrawals<sup>10</sup>.

2.10. The non-availability of detailed age-specific participation rates from the 1961 Census has been a handicap in making such adjustments. The NSS data do provide more detailed age-specific participation rates but the age-groups have not always been comparable. The NSS tables on urban labour force participation rates distinguish between the States but, for rural areas, the State tables are not yet available. The NSS sample is probably not large enough to give sufficiently precise estimates of age-specific participation rates for all the States, that were necessary while making the labour force projections for the Fourth Plan.

### **Employment Generation**

2.11. As indicated earlier, the estimates of employment supposed to have been actually generated during a Plan period are based *in part* on the same norms as are used to estimate the "employment potential" at the beginning of the Plan period. Any difference between the two is, therefore, largely attributable to divergence between the "planned" and the "actual" investment and output.

2.12. In view of the difficulties experienced in estimating the volume of investment in the noncorporate segment of the private sector, more particularly in agriculture and small-scale industries, the estimates of employment generation are necessarily subject to an unknown margin of error. In particular, the estimates of additional employment generated in agriculture have been largely conjectural. In rural areas, persons from cultivating families who enter the labour force are customarily absorbed in the agricultural sector without regard to the quantum of work they may get and do not normally "seek" alternative employment. Those who seek non-agricultural jobs might at times fall back on agriculture particularly if they, or their families, own or could lease in some land. Female workers in rural areas also work mainly on family farms or similar household enterprises; even the job-seekers among them might frequently drop out from the labour force and confine themselves to household work when the available opportunities are inadequate.

2.13. The evidence from the 1951 and the 1961 Censuses as well as the various Rounds of the NSS suggests that the number of persons working in the agricultural sector did increase substantially over the periods 1951-61 and 1955-66, though the quantum of work and/or income of the additional workers is not known. On the other hand, as noted earlier, the Planning Commission's estimates relating to agriculture appear to have been made in terms of the additional employment reckoned on a "full-time" basis. The two are therefore not comparable.

2.14. The difference between the Planning Commission's estimates of employment generated in agriculture and the increase in the number of persons engaged in farming as recorded by the Censuses and the NSS is very large. Since large sections of the labour force in agriculture were exposed to under-employment throughout the period covered by these estimates, and no data are available for assessing the direction or extent of change of under-employment in this sector over the period, there is no way of comparing the realised growth of employment with the growth as anticipated in the Plans.

2.15. It is however worth noting that, according to the data collected by the NSS in rural India the percentage of the gainfully employed population that was "severely under-employed" (i.e. working 28 hours or less during the reference week and available for additional work) has shown some decline between the 14th and the 17th Rounds (1958-59) to (1961-62). This will be evident from Table 2 below:

TABLE 2

**The percentage of Gainfully employed Males and Females Working for 28 Hours or less and Available for Additional Work According to the Specified Rounds of the NSS in Rural India**

NSS Round	Year	Male	Female
14th	.. 1958-59	5.78	8.94
15th	.. 1959-60	5.46	9.08
16th	.. 1960-61	3.84	6.55
17th	.. 1961-62	3.96	5.89

*Note:* The concepts and methods used in these Rounds are generally comparable.

*Source:* The NSS, Reports No. 100 (pp. 154-55; 175-76); 148 (Draft) (pp. 96, 100, 120, 124); 114 (pp. 152, 158, 167, 176); 197 (Draft) (pp. 105-6; 131-32).

<sup>10</sup>See Chapter III, para 3.22; also Appendix V.

2.16. For the non-agricultural sector also, reliable data on employment generation are available only for enterprises in the private sector which employ more than specified minimum number of workers (generally referred to as the organised segment of the private sector) and for enterprises in the public sector. Under the Employment Market Information Programme (EMI) of the Directorate General of Employment and Training (DGET), data are normally collected for establishments employing 25 workers or more. For the Third Plan period one can thus obtain an estimate of actual increase in employment—about 3.12 million—in the civilian public sector and in the non-agricultural sector together (excluding small-scale establishments and plantations)<sup>11</sup>. The inclusion of increased employment in the defence sector would not raise this figure above 4 million. Since private sector establishments employing 25 persons or more and engaged in trade, commerce, transport etc. are covered by the EMI data, this figure of 4 million must be taken to include part of the increase in what was described as 'indirect' non-agricultural employment in the Planning Commission's estimates. However, for the other three-fifths of the estimated increase in employment of 10.5 million in the non-agricultural sector during the Third Plan, the statistical basis for cross-checking is totally inadequate.

### *Employment Norms*

2.17. The Planning Commission has made several attempts to refine the employment norms by consulting the various concerned agencies. Yet the outcome has been far from satisfactory. For estimating the employment potential of a Plan, fairly reliable data are necessary on additional employment per unit of investment and/or per unit increase in output in different sectors. The relevant ratios not only differ from industry to industry but are seldom the same at the margin as on the average for the same industry. Changes in technology and organization introduce further problems. The projection of past experience into the future for estimating increases in employment is therefore rather hazardous.

2.18. In spite of this limitation, estimates of employment potential derived from observed ratios may be reasonably satisfactory for certain sectors of the economy such as organised industry or mining, particularly if the estimates are based on a fair degree of disaggregation (such as in inter-industry analysis) and allowance is made for the possible divergence of the marginal from the average ratios. Such a procedure is, however, not feasible at this stage for large segments of the services sector. The practice hitherto adopted by the Planning Commission for estimating additional employment in "other sectors, including trade and commerce", by assuming it to be a certain percentage (56 per cent in the third Plan) of the total estimated increase in "construction and continuing non-agricultural employment", is quite arbitrary and is almost a shot in the dark.

2.19. It is also important to recognise, that, given the organisational characteristics of household and small-scale enterprises based largely on family labour, and the prevalent differences both in the attachment of family labour to such enterprises and in the intensity of their employment it is impossible to judge how a given increase in employment potential is likely to get distributed among the persons in the labour force even if such an increase could be somehow precisely estimated. In practice, when a norm has been used relating planned investment and increase in output to growth of employment, it has not always been made clear whether the additional employment estimated is full-time or at the level actually then prevalent in the industry. As mentioned earlier, if the norm used explicitly refers to full-time work (as has sometimes been the case) but the prevailing pattern of employment in a sector is seasonal and not full-time or perennial, a given amount of investment or increase in output would result in a large number of persons securing employment therefrom (though on a less than full-time basis) than would be estimated by the use of the norm.

2.20. This is best illustrated by the estimates of employment potential in the construction sector. During each of the Plans, a significant proportion of the estimated growth of employment has been attributed to this sector. The additional employment potential was, however, estimated in terms of man-years, more specifically, in terms of full-time employment for 300 days. In reality, construction tends to be a seasonal activity and a substantial proportion of the persons working on construction projects tends to be employed on daily or weekly wages. The construction employment generated by the investment in the Plans is therefore likely to have been spread over a larger number of persons than estimated.

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<sup>11</sup>This figure excludes the plantations in Madras, Kerala and Mysore which were not covered in the EMI data for March, 1961.

2-21. We have given a good deal of thought to the question of refinement of the estimates of employment generation in different sectors but are unable to suggest any methods that would significantly improve such estimates, in the short or medium run, for the economy as a whole. The most that can be attempted by way of estimation is the likely growth of employment in a few segments of the economy such as in manufacturing industries (that too only within enterprises employing a specified minimum number of workers) and in certain types of services. For the rest, reliance has to be placed primarily on recording at frequent intervals changes taking place in the composition of the labour force (more particularly the numbers seeking wage employment), its industrial distribution, the wage rates for different types of labour, the intensity of employment, and the numbers seeking employment. This can perhaps be done through quinquennial sample surveys. The data thrown up by such surveys would help to throw light on the trends in the labour market and make possible more dependable projections of the trends in employment and unemployment in the future.<sup>13</sup>

### *Direct Estimates of Unemployment*

2-22. Besides the indirect procedure for estimating the backlog of unemployment, the Planning Commission has been using, more particularly in recent years, a direct method for estimating its volume. This direct method has been based mainly on the Employment Exchange data for urban areas and the NSS data for rural areas.

2-23. The available data on the number of persons on the Live Register of the Employment Exchanges do not, however, permit reliable estimates of the volume of urban unemployment because (i) some of those registered reside in rural areas and are not part of the urban unemployed; (ii) some of them are in fact employed or are students; (iii) not all the unemployed even in urban areas register themselves with the Employment Exchanges; and (iv) some of the urban unemployed probably register at more than one exchange. It is, therefore, necessary first to try and adjust the Live Register figures for these limitations.

2-24. Information on the proportion of the urban unemployed who register with the Employment Exchanges has been available only from the various Rounds of the NSS in urban areas. On the proportion of rural registrants, and on the percentage of students and the already employed among the registrants, no comprehensive information has been available until very recently.<sup>14</sup> A few months ago, a survey conducted by the DGET of about 18,000 persons on the Live Register of the Employment Exchanges in different States of the country has for the first time provided some estimates about them. Appendix III discusses in some detail the limitations of these data collected by the NSS and the Employment Exchanges. No information is still available on the extent of multiple registration. Under the circumstances, the use of the Employment Exchange data by the Planning Commission could have been based only on extremely rough and undependable correction factors.

2-25. The percentage of unemployed in urban areas indicated by the data from the Employment Exchanges, substantially exceeds the percentage estimated by NSS surveys. It has been suggested that this divergence is probably due to the fact that the NSS definitions would have the effect of classifying respondents as employed when for all practical purposes they may in fact be unemployed. Thus it has been pointed out that a person reporting some work, "however nominal it may be", during the reference period of one week is classified as "employed" by the NSS. The converse of this, however, is that many of those classified as unemployed during the reference period of "one week" might be employed during the rest of the year. Further, the NSS has tabulated the data on employed persons according to the number of hours worked by them and their availability for additional work. It would appear from these data that, even if persons reporting work for 28 hours or less during the reference week and available for additional work were included with the unemployed, the urban unemployed according to the NSS would not exceed 4 per cent of the urban labour force.<sup>14</sup> On the other

<sup>13</sup>See also Chapter IV, para 4.32.

<sup>14</sup>The earlier surveys on this subject were restricted to some selected Employment Exchanges only.

<sup>14</sup>This inference is based on the information available from the 17th and the 18th Rounds of the NSS. According to the data from the 21st Round of the NSS, about 3 per cent of the labour force could be classified as unemployed (i.e. including those working for less than 28 hours and available for additional work).

hand, the number of persons on the Live Register of the Employment Exchanges on December 31, 1968, after adjustment for the various factors mentioned above (on the basis of the recent DGET survey and the NSS data on the proportion of the unemployed who register themselves with the Employment Exchanges) amounts to about 7.5 per cent of the urban labour force.<sup>15</sup>

2.26. The adjusted Employment Exchange figures on the level of urban unemployment seem to have been considered by the Planning Commission more acceptable than the number of unemployed based on the urban labour force surveys of the NSS. The reason given is an impression that the latter under-estimated the volume of urban unemployment. If this impression is correct, the use of NSS data for determining the proportion of the urban unemployed registering with the Employment Exchange would also seem to be questionable. Information on the proportion of registrants who are actually residents in rural areas, and on the percentage of students and the already employed among the persons on the Live Register is again subject to the limitation that the respondents might consciously strive to avoid any inconsistency between their responses and the fact of their earlier registration with the Employment Exchanges.

2.27. The precise reasons for the discrepancy between the NSS and the adjusted Employment Exchange data on the urban unemployed are difficult to determine on the basis of available information. Perhaps the two sources of data are basically non-comparable. The objective of the data recorded by the Employment Exchanges has not been specifically to provide estimates of the volume of urban unemployment. Further, since it has not been possible to assess firmly the employment status of a person seeking registration at the Employment Exchanges, the statistics about the unemployed supplied by the exchanges cannot be expected to be comparable with the figures estimated by the NSS which uses a specific definition to classify persons as unemployed. For the same reasons, it is not possible to state with certainty which of these two sources of information offers more accurate and dependable estimates of the volume of urban unemployment.

2.28. The NSS used to conduct rural labour force surveys to estimate unemployment in rural areas until the 17th Round (1961-62). Thereafter the data on rural unemployment are collected only in the Integrated Household Schedule which is canvassed for a relatively small number of households. Information from these Integrated Household Schedules has recently been tabulated for the 19th Round (1964-65) and for two sub-samples of the 21st Round (1966-67).

2.29. Some caution is, however, necessary in interpreting the NSS estimates of unemployment. It is inappropriate to assume that the percentage of the unemployed reported during a Round—based on data collected over a year—refers to full-time unemployment, because persons who may be without work and seeking or available for work during the reference period of one week may not be without work throughout the year. The NSS data could rightly be used to assess only the pattern and extent of rural under-employment. Moreover, as we shall discuss below, the concept of unemployment is not meaningful in the conditions prevailing in rural India.

2.30. In conclusion, we would like to note that one of the major shortcomings of the estimates of unemployment presented in the Plan documents has been their high degree of aggregation, except for a separate reference to the problem of educated unemployment, i.e., those educated upto matriculation or higher level. The various estimates would be more meaningful for analysis and public policy, and at the same time more reliable, if distinctions are made in the demand and supply of labour in terms of their location (State or Zone), rural-urban residence, household and wage employment, and the characteristics of sex, age and education. Though lack of the necessary data has been the main reason for the presentation of aggregated figures for the net additions to the labour force and for the likely growth in employment opportunities, the Planning Commission can usefully advise other agencies to collect and process disaggregated data of the kind required. Our recommendations on the subject of labour force data will be presented in the subsequent discussion.

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<sup>15</sup>See Chapter IV, para 4.12 also Appendix III.



## CHAPTER III

## A FRAMEWORK OF ANALYSIS

In the previous two chapters we have reviewed the estimates of employment and unemployment made by the Planning Commission and have pointed out the various limitations of these estimates.

3.2. We believe that by introducing more clarity in the concepts of labour force and unemployment and by modifying them in consonance with the nature and the structure of the Indian economy, it would be possible to derive estimates which would reflect more accurately the different facets of the problem. It is also necessary to adopt survey techniques that would be more appropriate for measurement of these phenomena.

3.3. In this chapter, we first describe the particular features of the Indian economy and of the types of employment it generates, that have a bearing on the concepts of labour force and unemployment. We then discuss the problems of measurement of unemployment which arise as a result of these features of the economy. It will be evident from the analysis that a single numerical estimate of the unemployed cannot be very meaningful for conceptual reasons. Further, for the purpose of policy-making, it is necessary to know not only the nature of the observed unemployment and the number of those affected in each category, but also the regions in which the problem is more acute, the age group and educational equipment of the unemployed, whether they are seeking job for the first time, their earlier status (employer, employee, own account worker or unpaid family worker), the length of their waiting period etc. Information on some of these qualitative aspects of unemployment is already available from several surveys. What is therefore needed is simply a more systematic tabulation and proper interpretation. However, information on some other relevant aspects is not being collected at present. We have listed these additional requirements and their relevance to the formulation of employment policies has also been outlined below.

3.4. Finally, we emphasize the point that even the improved estimates of participation rates, industrial distribution of the labour force etc., pertaining to previous years would not be wholly adequate for the purpose of projections. The development process is likely to, in fact is meant to, alter the various elements which enter into such projections. The dynamics of changes in the demand and supply of labour should therefore be constantly watched.

3.5. At the outset, it is important to recognise that the labour supply available to the Indian economy for productive activity—whatever the criteria by which it is identified and estimated is of an extremely heterogeneous character. As Table 3 would indicate, a significant proportion of the labour supply is self-employed or unpaid family labour within household enterprises, and only a part seeks wage or salaried employment. The relative importance of these components differs considerably between rural and urban areas. The unpaid family workers consist mainly of women and children whose participation in economic activity is generally limited and who might not ordinarily be suppliers of labour outside their own individual household.<sup>1</sup> Unlike these family workers, the participation of the self-employed or own account workers is usually as complete as the pattern of economic activity in the given industry or occupation and the availability of land and/or capital stock permits. However, both among the self-employed and the unpaid family workers, even when the employment they obtain in their own enterprises is less than adequate, there would be many whose mobility is likely to be limited ; and they may not, therefore, seek and/or be available for employment elsewhere.

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<sup>1</sup>According to one estimate, the number of unpaid family workers in India in 1961 was about 15 millions in the male labour force aged 15 and over, and 21 millions in the corresponding female labour force. Assuming continuation of (a) the age-specific labour force participation rates estimated on the basis of the 1961 Census, and (b) the age-specific proportions of unpaid family workers in the labour force estimated on the basis of the NSS data, the net additions to the labour force aged 15 and more, during the period 1961–1981, are estimated to be about 115 million of whom unpaid family workers would be as many as 24 million. See : Appendix V.

TABLE 3

*Percentage distribution of the gainfully employed in Rural and Urban India, according to Status, Specified Rounds of the NSS.*

Status	Rural India			Urban India		
	17th Round (1961-62)			15th Round (1959-60)		
	Males	Females	Persons	Males	Females	Persons
Employees ..	31.50	29.90	31.06	53.10	43.34	51.40
Employers ..	9.00	3.06	7.36	2.03	0.43	1.76
Own Account Worker ..	43.66	19.14	36.79	36.68	30.19	35.55
Unpaid Family Workers ..	15.84	47.90	24.79	8.19	26.04	11.29
All ..	100.00	100.00	100.00	100.00	100.00	100.00
Sample Persons ..	146,619	139,724	286,343	18,872	16,935	35,807

SOURCE :—National Sample Survey, Report No. 169 (Draft), Fifteenth Round, Urban, P. 22; No. 197 (Draft) Seventeenth Round, Rural, PP. 20-22.

3.6. Similarly, there are important differences within the category of those who seek employment on the basis of contractual payments. Some of them have a base of self-employment (as in the case of operators of small holdings in the rural sector), while others have none, some are literate (or "educated"), others illiterate. These differences are important because they are relevant to the elasticity of supply of labour, the way in which a particular quantum and type of employment potential created by development is likely to get distributed, and the type and volume of unemployment that remains.

3.7. In view of these characteristics of the labour force—pre-ponderance of self-employment and a fairly large component of "unpaid family workers" in household enterprises—there is very little likelihood of much chronic open unemployment throughout the year. As is well-known, in the case of the self-employed (particularly in rural areas, but, to some extent, in urban areas as well) lack of work manifests itself as under-employment rather than unemployment. Only agricultural labourers employed on contractual terms face periods of idleness or open unemployment during the slack agricultural season. In urban areas, on the other hand, unemployment is generally open and chronic, perhaps with a certain seasonal component reflecting the influx of rural job seekers into towns, or fluctuations in the level of activity in some industries. On account of these diverse facets of the phenomenon, the problem

\*The usual statistics on the industry or occupation of the gainfully employed do not always bring out these facts. For individuals working as both cultivators and agricultural labourers, the activity to which they devote a major portion of their work-time is considered their major activity and the basic industrial/occupational classification takes only the primary activity into account. The 1961 Census data on the secondary activity of workers suggested that almost 11.2 million cultivators (out of 99.6 million) worked secondarily as agricultural labourers and 4.1 million (out of 31.5 million) agricultural labourers worked secondarily as cultivators. The total number of persons who work for some time as agricultural workers was 11.5 million greater than that reported on the basis of primary activity. See: *Census of India, 1961, Vol. I, India, Part II-B (ii), General Economics Tables*. It is important to note that the data on secondary activity were collected only for cultivators, agricultural labourers and those engaged in household industry.



of defining and measuring employment as well as unemployment or under-employment becomes very complicated<sup>a</sup>. Extreme caution has, therefore, to be exercised in interpreting the data.

3-8. The point may be illustrated by reference to the estimates of the over-all quantum of rural unemployment made by the Planning Commission for the Third Plan<sup>4</sup>. The estimate was obtained by applying the proportion of unemployed (1.62 per cent) derived from the 16th Round of the NSS to the entire rural population. As noted earlier, the percentage of unemployed reported in a given NSS Round is however an average of the varying weekly situations recorded for different periods during the year over which the investigation is spread. There is no reason to believe that those classified as unemployed during the specific reference week preceding the date of survey of a household or households would necessarily be without work throughout the year. The fact that the sample households surveyed are supposed to be uniformly spread over the entire year does not remove this limitation; it means an aggregation of the weekly situations in regard to the unemployment status of individuals rather than the continuing unemployment of the same set of individuals. The estimates of the unemployed based on the NSS Rounds indicate the position in an average week, so to say, in respect of the number of persons suffering from unknown but varying periods of unemployment; among them there may, of course, be some who are unemployed throughout the year.

3-9. Some improvement in these estimates can be brought about even without altering the conceptual framework. In view of the heterogeneity of the labour force discussed above, estimates of employment and unemployment need to be attempted for homogeneous segments of the labour force and/or population. Homogeneity needs to be ensured also in terms of the period of time covered by the estimates. In rural India, the predominance of agriculture leads to a marked seasonality of employment. The level of unemployment as well as the size of the labour force appear to change over different seasons of the year. It is therefore necessary to obtain separate estimates of the level of unemployment and other labour force characteristics for different seasons. Further, in view of the possible difference in the peak and slack seasons in different States, it is necessary to obtain separate estimates for each State. A further distinction could be made between single crop areas with dry farming and areas with facilities for irrigation and multiple crops.

3-10. Even in surveys of the labour force in urban areas, it is necessary to distinguish between towns of different size classes. The small towns resemble very closely the rural areas in their vicinity while the big cities have organised labour markets, comparable in many respects to those found in the more developed countries. Separate estimates of labour force characteristics and unemployment for towns of different size classes will, therefore, be useful.

3-11. Since the size of the samples is not large enough, different sub-rounds of the NSS may not provide reasonably stable estimates with the requisite disaggregation for the characteristics noted above. The sample size will, therefore, need to be increased suitably to provide seasonal or sub-round estimates for different States.

3-12. The estimates of the level of unemployment so obtained should not ordinarily be aggregated and should be presented separately for each season or quarter and for different regions with sharp variations. As a result, we shall have not one estimate of unemployment but estimates indicating the range of variations over seasons and regions. Persons who remain unemployed even during the peak seasons in rural areas will probably represent the hard core of unemployed needing special study and attention.

3-13. The suggestions made above for collecting data by seasons will remove one of the limitations of the present estimates of unemployment derived from NSS Surveys, since the employment situation revealed by the data for the reference week will not be regarded as reflecting the position for the entire year but only for the season covered by the sub-round. One important defect noted earlier will however still remain. According to the current definitions in use, persons working for only

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<sup>a</sup>Professor P.C. Mahalanobis did place the issue in sharp focus in 1963 when he said: "The concepts of employment and unemployment as used in the advanced industrialised countries are not meaningful in the case of household enterprises which constitute an overwhelming proportion of productive activities in rural areas in India and other under-developed countries. A self-employed person or a person helping in a household enterprise can never be unemployed in the sense in which this concept is used in the industrialised countries." An extract of the comments made by Professor Mahalanobis, Honorary Statistical Adviser to the Government of India, on Rural Unemployment surveys during the discussion of the National Sample Survey Programme for the 19th Round (Cyclostyled).

<sup>4</sup>See Chapter 1, para 1.18.

a nominal period of time during the reference week are classified as employed. In rural areas only those who, owing to lack of work, do not work even on a single day during the reference week and are currently available for work are classified as unemployed. In urban areas, such persons must also be seeking "full time" work<sup>1</sup>. The above criteria for distinguishing between 'employed' and 'unemployed' would have a tendency to under-estimate the degree of unemployment actually prevailing, whether for the averaging process the period covered is a whole year or only a particular season.

3.14. In order to obviate this defect to some extent, it is necessary to abandon the practice of presenting the estimates simply in terms of 'employed' and 'unemployed' persons and instead try and obtain some measure of the level or rate of unemployment in the economy by reference to the daily recorded data on employment and unemployment. Essentially, this will amount to collection of data about the labour time disposition of each individual during a reference week, such as was attempted by the NSS in rural employment and unemployment surveys from the 11th to the 17th Rounds. During these Rounds, the data on labour time disposition were collected only for persons who were classified as gainfully employed during the reference period. Under the new approach suggested by us, such information would be collected for every individual in the sample.

3.15. The NSS has been collecting data on intensity of employment in terms of the number of hours of work during the reference week. This certainly provides one basis for measurement of intensity. One may, however, question the validity of a measurement of intensity with reference to hours of work when the labour requirements in agriculture, small-scale industries, etc., cannot be reduced to a standard pattern for even a particular season. For this reason, it appears to us that while the collection of data on hours of work is useful, it would be better if data are collected about the number of days on which a person is employed or unemployed during the reference week, without recording the number of hours of work on each day, and the present estimates of unemployed are replaced by a measurement of the rate of unemployment during a season.

3.16. Under the new approach, the unit of analysis or aggregation will be a day, though the data will be collected for a week. The level of unemployment during the different seasons/sub-rounds will be measured in terms of the total number of recorded days of unemployment, expressed as percentage of the total number of days on which the respondents report themselves to be in the labour force (employed/unemployed) during the particular season or sub-round. (Thus the days on which persons were outside the labour force will be excluded not only from the numerator but also from the denominator). The level of unemployment so measured will show the proportion of unemployed in the labour force on any one day, on the average, during the given season/sub-round indicating the extent of under-utilisation of the available labour supply. However, the estimate will not indicate the number of persons identifiable as unemployed throughout the season. In the Plan documents, the Planning Commission used to give estimates of the number of unemployed persons. It should be emphasized that the estimate of unemployment derived from the above procedure will not correspond to the Planning Commission's estimates of the unemployed.

3.17. The information for seven days of the reporting week can be used to obtain estimates of employment and unemployment comparable with those available from the present scheme of analysis of labour force data of the NSS. For persons unemployed during all the seven days in the reporting week, information should be collected also on the duration of unemployment. In addition, they should be asked whether they expect to take up some job or start/join an enterprise at a future date and if so, the nature of that job or enterprise. A person who is unemployed throughout a particular week and does not expect to take up some gainful work in future, even when he is in search of or available for it, can appropriately be deemed really unemployed. Among them, those who are unemployed for a long period, say for a year or more, can reasonably be considered as needing full-time jobs and can be called chronically unemployed.

3.18. Although the estimates of unemployment based on the recommendations made above will reflect more realistically the pattern of employment and unemployment in the economy, we need more detailed information regarding the various segments of the labour force and to some extent even for those outside or on the periphery of labour force. First, we need to have a better idea about the degree of commitment or non-commitment of those who withdraw from the labour market after

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<sup>1</sup>Central Statistical Organisation, *Standards for Surveys on Labour Force, Employment and Unemployment*, New Delhi, 1961. See also Appendix I.

seasonal work. Do they withdraw because of the compulsions of their "non-gainful" activity (such as household work) or do they do so because of the presumed or real non-availability of particular types of work? Without a few probing questions, no precise idea about their motivation for 'not working' after certain peak season would be available and their classification as 'outside the labour force' or 'unemployed' would remain a debatable issue.

3.19. In view of such fluctuations in the characteristics of the labour force, it would be useful if the employment/unemployment data obtained for the season or sub-round are also analysed in terms of the usual status of the respondents. The usual status characteristics, that might be taken into account, would include (a) labour force status (in the labour force/outside the labour force, i.e., house-workers, students and others); (b) employment status (employed/unemployed); (c) industry (agriculture/household manufacturing/non-household manufacturing/others); and (d) status or class of worker (employer, employee, self-employed and unpaid family worker).

3.20. In urban labour force surveys, an attempt should be made to ascertain how many of those classified as 'employed' had *actively* sought (a) alternative or (b) supplementary part-time or full-time jobs and the reasons for the same (for example, inadequate income or dissatisfaction with the utilisation of skills and/or educational training). Periodical canvassing of such probing questions would permit better comparability between the NSS data and those reported by the employment exchanges. In addition, they would indicate the extent to which the employed persons view themselves as under-employed.

3.21. For unemployed persons who had worked at some previous time, it would be useful to find out their industry, occupation, and status in the last job held by them. Such information will make it possible to understand the factors responsible for their unemployment and devise programmes of creating employment opportunities suitable for their experience and skills gained during periods of employment.

3.22. In addition to the collection of more information as suggested above, it is necessary to ensure proper analysis and interpretation of the available data for policy formulation. For example, for the purpose of employment planning, it is more appropriate to consider the number of entrants into and withdrawals from the labour force rather than only the net additions to the labour force. Between 50 to 75 per cent of the urban unemployed enumerated by the 1961 Census or reported by the NSS and even the job-seekers registered with Employment Exchanges, seem to be in the age-group 15-24 or 16-26. Also, a majority of the job-seekers seem to be new entrants into the labour force.<sup>4</sup> The importance of this observation can be appreciated by reference to the estimates for the period 1966-71 based on detailed age-specific labour force participation rates; they suggest that the expected net addition of 17.40 million to the male labour force aged 15 and over during this period will result from new entrants numbering 25.87 million and withdrawals numbering 8.48 million.<sup>5</sup>

3.23. Though of late attention has been focussed on unemployment among certain categories of highly educated or trained persons, such as engineers, the problem is perhaps more acute, at any rate in terms of numbers, for those who are only nominally educated in the sense that they have not acquired adequate proficiency in any vocation. Many of these nominally educated are probably in the category of persons who leave school before matriculation or obtain a bare pass class in higher examinations. The problems of this group need closer study and for this purpose the information on employment and unemployment or under-employment should be cross-tabulated by educational status. The subject of educated unemployed is discussed further in Appendix IV.

3.24. Even after all the refinements suggested above in the concepts and measurement of labour force are carried out, projections based on past data will suffer from some limitations. Principally they arise from the fact that as development proceeds, the rate of participation as well as the composition of the labour force are likely to undergo change.

3.25. As we have noted in Chapters I and II, a view was apparently held in the Planning Commission around 1958-59 that "with the stage in development we might reach in 1976, it would be safe to assume that the labour force participation rate will increase to 45 per cent from the level of

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<sup>4</sup>See Appendix II.

<sup>5</sup>See Appendix V.

40 per cent indicated by the 1951 Census and 42.5 per cent assumed for the Third Plan. While it is true that the 1961 Census indicated a higher aggregate participation rate of 43 per cent, there is reason to believe that this was partly due to the very liberal definition adopted for the enumeration of workers in seasonal industries. Apart from this, there is no evidence to suggest that the participation rate tends to increase with development. The NSS data on crude male participation rates for the urban India from the 9th Round (1955) to the 21st Round (1966-67) indicate, if anything, a slightly declining trend. For females in urban India, the trend is not clear. For rural India, the crude rate fluctuated from Round to Round and does not indicate any significant trend after the 9th Round. The rate for rural males, however, shows some decline from the high levels of the 14th and the 15th Rounds—57 and 59 per cent to about 52—54 per cent during the 17th to 21st Rounds\*.

3.26. It may be mentioned that, as a general rule, in the developed countries, the overall participation rates do appear to be higher than those in the developing countries. But this is mainly due to the difference in the age-structure of the population in the developed and developing countries. It will be evident from Table 4 below that the age-specific participation rates in the ages 15 to 60 are not very different for the two categories of countries; in fact, the rate for the age-group 0—24 is lower in the developed countries. As far as India is concerned, for the next few years at least, the percentage of the young (i.e., those below 25 years of age) in the total population is likely to increase rather than decrease. Therefore, a decline in the participation rate of persons aged less than 25, associated with the process of development, would tend to depress the over-all participation rate.

TABLE 4

*Estimates of Sex-Age-Specific Participation Rates in Countries of North-West Europe and Less Developed Countries, 1965*

Age	Males		Females	
	Less Developed Countries	North-West Europe	Less Developed Countries	North-West Europe
0—14	6.5	1.1	4.0	0.9
15—24	78.1	76.2	36.9	60.2
25—54	96.3	96.8	40.1	41.3
55—64	86.8	83.3	29.2	28.9
65+	57.5	23.4	14.5	7.4
All ages	53.2	61.1	22.9	28.6

SOURCE.—J. N. Ypsilantis, "World and Regional Estimates and Projection of Labour Force" Mimeographed (1966), quoted in "The Employment Problems in Less Developed Countries: A Review, a working document for the Second Working Conference on Research into Employment Problems in Developing Countries, Paris, 8th—December, 1969, convened by the Development Centre of the Organization for European Cooperation and Development (O.E.C.D.)."

\*All less developed countries exclude Sino-Soviet countries, O.E.C.D. countries and Southern Africa, Australia and New Zealand North-West Europe excludes Mediterranean and Eastern European countries."

3.27. Two factors appear to be particularly relevant to the impact of development on participation rates, namely, urbanisation and decline in the share of agriculture in labour force.

\*For details and further discussion of this subject, See Appendix II.

and increasing school enrolments. An increase in school enrolments delays entry into the labour force and lowers the participation rate. The effect is observed significantly in the age-group 10 to 14 and to a lesser extent in the age-groups 15 to 19 and 20 to 24. As for urbanisation, it may be noted that urban participation rates are lower than those for rural areas, particularly for females (See Table 5 below). This is probably due both to higher school enrolment rates and fewer opportunities for self-employment or work within household enterprises in urban areas. Thus, if development leads to greater urbanisation, it would result in lower participation rates.

TABLE 5

*Labour Force Participation Rates in Rural and Urban India according to 1961 Census (Per cent)*

	Rural	Urban
Males	58.51	54.15
Females	31.45	11.25

SOURCE :—Census of India, 1961, Vol. 1, India, Parts II-B (i) and II-B (iii), General Economic Tables.

3.28. Another consideration to be kept in mind in analysing the likely trends in employment and unemployment is that since the various components of the labour force are likely to be affected differently by different patterns of development, it would be difficult to quantify or analyse probable changes from the supply side of labour independently of the likely changes on the demand side. Changes on the supply side will be affected particularly by factors such as the extent of increase in productive employment opportunities within the household enterprises, increase in school enrolments and literacy and wage/income differentials associated with particular patterns of development.

3.29. If the growth of productive employment opportunities on family farms or within other household enterprises is not adequate to absorb the increase in this category of the labour force, two kinds of response could be expected. One is withdrawal of some from the labour force, a response often noticed from among females in the rural labour force. Another possible response is an increase in the supply of labour seeking employment on contractual basis as "employees". Whether the net balance of these responses is positive or negative will depend on a variety of factors such as the minimum income requirements of the "self-employed", opportunities for wage employment in the vicinity, the degree of literacy, the skills acquired etc.

3.30. On the basis of our present knowledge, it is difficult to predict with any accuracy either the direction of change in the labour participation rate on account of such factors or the kind of transformation that might take place in the pattern of labour supply. All one can say is that it would be a serious mistake to proceed on the assumption that the entire labour force is of a homogeneous character and make estimates of increases in the labour force simply on the basis of population projections and aggregate sex-age-specific participation rates reflected in data relating to the past.

3.31. There is some evidence that the participation rate in some parts of the country (such as Kerala) has tended to fall over the decades\* a phenomenon attributable in part to the decline in the share of agriculture in the total labour force (since the participation of women and children in productive activity tends to be relatively high in this sector) and in part to increased school enrolment and literacy which delay the age of entry into the labour force. Evidence of such fall is also available from data relating to the urban sector of the economy in recent

\* See Appendix VII, Tables 2 and 3.

years; the explanation in this case may be largely growth of literacy. But there is as yet no evidence of a noticeable decline in the participation rate in the rural sector of the economy taken as a whole.

3.32. What is more strikingly evident is the high percentage of "employees" in the total labour force in the rural sector in certain regions of the country and the tendency for agricultural labourers to form a higher proportion of the rural male labour force in the lower age-groups than in the higher age groups<sup>10</sup>. The latter tendency could be attributed to the delay in the absorption in self-employment; as a result those available for work might, in the first instance seek employment. But it is also likely that it is a reflection of the growing pressure of population on land and/or of larger employment opportunities on a contractual basis attracting the younger among the hitherto "self-employed" to seek work as "employees".

3.33. Whatever be the explanation for these recorded phenomena the major point we would like to emphasize is that, in the analysis of employment problems in the context of development, it is important to investigate and analyse the character and volume of the demand and supply of labour at a wage or salary. The market for labour defined in this narrower sense will *reflect*, even if not fully measure, the pressures and the resulting net effects of the changes taking place in the demand and supply of self-employed and unpaid labour. The problems involved in identifying and measuring the supply of and the demand for labour at a wage or salary, both in the rural and urban sectors of the economy, need more detailed consideration. Suitable indices have to be devised to observe and assess the pressures in different segments of the labour market defined in this narrower sense.

3.34. In brief, we recommend separate estimation for the different segments of the labour force, taking into account such important characteristics as region (State), sex, age, rural-urban residence, status or class of worker and educational attainment. Attempts could then be made to identify the demand likely to be generated in the various regions (States) for different categories of labour as a result of various developments envisaged under the Five Year Plans. Such effort should concentrate initially on sectors where the personnel or labour requirements can be clearly recognised.

3.35. At the end of the Plan, the final estimate might be compared with the data on the labour force collected through the quinquennial surveys designed for disaggregated analysis. The reasons for the differences, if any, could then be investigated and identified, and the findings taken into account in subsequent projections. What we would like to emphasize is the need for disaggregation and for checking on the estimates for each Plan period with the help of data collected or derived independently of those employed in making the original projections.

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<sup>10</sup>This is evident in the 1961 Census data for Maharashtra, tabulated by five year age-groups. See Appendix II, Annexure II.



## CHAPTER IV

THE MAJOR SOURCES OF DATA ON EMPLOYMENT AND UNEMPLOYMENT :  
SUGGESTIONS FOR IMPROVEMENT

We shall now proceed to review the major sources of data on employment and unemployment in India in the light of our recommendations in the preceding chapter about the appropriate framework for the analysis of employment and unemployment. In this review we shall focus attention primarily on those aspects of collection, tabulation and analysis of data which appear to us particularly important for improving our understanding of the prevailing situation and for policy purposes.

4.2. The three major sources of data on employment and unemployment in India are : (i) the decennial Censuses, (ii) the various Rounds of the National Sample Survey (NSS) and (iii) the Employment Market Information (EMI) and the Employment Exchange data collected by the Directorate General of Employment and Training of the Ministry of Labour and Employment of the Government of India. We shall discuss each of these sources in order.

*Decennial Population Census as Source of Data on the Labour Force and its Industrial and Occupational Composition*

4.3. The decennial population Censuses are a unique source of data on the absolute size of the labour force and its distribution by industry and occupation. Unlike the NSS or other agencies such as the EMI, the Census attempts to enumerate every individual in the country and can, therefore, provide the most comprehensive data on the economic activity of the population. Structural changes in the economy and the changes in employment opportunities associated with them tend to be reflected in the long run trends in the labour participation rate and in the industrial distribution of the labour force. Appendix VII discusses the trends evident from the Census data for the period 1901-61 for all-India and for the different States. Since the comparability of data from successive Censuses tends to be limited by conceptual differences, we shall briefly comment on the proposed concepts for the 1971 Census and make a few recommendations about the necessary classifications and tabulations.

4.4. The Censuses are usually conducted during the slack season of the year to minimise the chance of omission of individuals from the count. In the circumstances, the use of a short reference period for collecting information on the industry, occupation, class of worker, place of work and the secondary activity of those who are normally engaged in economic activity would not be quite appropriate, except for those whose characteristics remain essentially unchanged throughout the year. It is therefore necessary to modify the basis of identification of the labour force, used in these Censuses, for the collection of data on the economic activity of the population. Indeed, awareness of this particular problem is the basis of the use of a dual reference period by the 1961 Census and also for the proposed 1971 Census. According to the information conveyed to us by the Office of the Registrar General, in the 1971 Census an attempt will be made to collect information on the main activity of every individual and this will form the basis of the distinction between workers and non-workers. The reference period will be 'one week prior to the date of enumeration' for those working regularly in trade, profession, service or business and 'last one year' for those engaged in seasonal activities which are not carried on throughout the year. The question of secondary work will be asked also to those persons who are classified as non-workers in response to the question about their main activity. This approach has the advantage that it might provide a complete inventory of even part-time workers whose main activity might be household work or studies. One would have the opportunity to exclude or include such part-time workers from consideration, depending on the objectives of the analysis. It is however possible that the enumerators might try to lighten their workload by classifying a person as 'non-worker' and overlook asking the question about the secondary work performed by such a person. Due care must be taken to prevent such omission.

4.5. In the light of what has been said elsewhere in this Report, we would like to urge the Census authorities to give consideration to the possibility of recording and tabulating information on the 'status' or 'class of worker' (employee, employer, unpaid family worker, etc.) for even those who report their activity to be cultivation. A strong case exists for recording the class of worker or status of cultivator in order to identify how many of them are unpaid family helpers and how many enter the labour market as wage employees. The experience of the NSS suggests that it is not difficult to classify cultivators according to their status, and we would therefore recommend that the Census authorities explore

in depth the problems involved in separating cultivators who employ labourers or are employees, from the self-employed and unpaid family workers.

4.6. We would like to make a few suggestions about the tabulation plan relating to the data on economic activity :

- (i) The tabulation of the data on workers by broad age groups and industrial categories undertaken in the 1961 Census was not adequate for obtaining labour force projections that would permit drawing a distinction between the entries into and withdrawals from the labour force or the pace of change in the sectoral distribution of workers with age. As a result of some co-operative research by the University of Bombay and the Census authorities, such data have been tabulated by five year age groups, and for females by marital status as well, for the State of Maharashtra. Similar tabulations are currently being prepared for some other States as well. Our understanding of the pattern of participation by economic activity is likely to be considerably enriched when these data became available. If similar tables can be compiled from the data collected by the 1971 Census, it will be possible to study not only the effect of the differences in the concepts used in the two censuses on the size and composition of the working force but also the inter-sectoral mobility of workers during the inter-censal period, 1961—71. We therefore recommend that the 1971 Census should endeavour to compile a basic table on the economic activity distribution of the population by five year age groups, at least for the age range 10—34 and 55 and over.
- (ii) In the 1961 Census different age groups have often been used to tabulate the same data for rural and urban India. This has particularly been the case for the classification of the unemployed. A similar difference exists in the age-classification of the unemployed seeking work for the first time and the other unemployed. Also, the class of worker distribution was obtained only for workers engaged in activities other than cultivation. The use of computers for the 1971 Tabulation Programme should make it possible for the Census authorities to adopt uniform age groups for compiling tables on the same items for different groups of the population and to prepare the class of worker distribution for the entire working force, by sex and five year age groups.
- (iii) Finally, we wish to emphasize the need for a more detailed cross classification of workers by sex, five year age groups, educational level, and industry.

#### *Census Data on Unemployment*

4.7. Some efforts at collecting data on unemployment have been made in the last three Censuses. The data collected on the subject by the 1941 Census were not tabulated. In the 1951 Census, data were collected only in the three States of Uttar Pradesh, Bihar and Bombay, Saurashtra and Kutch, under the option provided to the Superintendents of Census Operations of various States to introduce an additional question in the Census Schedule. The number of unemployed reported in each of these States was very small.

4.8. In the 1961 Census, while identifying the status of those who were classified as non-workers, some information was obtained on persons 'seeking employment for the first time and persons employed before, but now out of employment and seeking work', although the instructions given to the enumerators did not elaborate the concept of 'seeking work'. The total of these two categories was taken as representing the unemployed. The number of unemployed enumerated by the 1961 Census was only 1.4 million, of whom 0.8 million were in urban areas. The very small number of 'unemployed in rural areas (0.6 million)' was perhaps a natural consequence of the definition and the reference period used to classify the workers. Anyone engaged in a seasonal activity such as agriculture, animal husbandry and household industries, who had worked for "at least one hour a day throughout the greater part of the working season", was considered a worker. These activities predominate in rural areas where most of the unemployment is essentially seasonal in character. In other words, anyone seeking work would ordinarily be able to find it for at least short periods during the peak season in agriculture. It is not surprising, therefore, that the number of rural unemployed enumerated by the 1961 Census was very low.



4.9. The 1961 Census estimate of the unemployed males in urban areas was a little higher than that indicated by the data from the 16th and 17th Rounds of the NSS covering the period July, 1960—July 1962 and relating to the urban sector. This will be evident from Table 6 below:

TABLE 6

*Unemployed as Per Cent of the Labour Force Aged 15 Years and Over in Urban India, According to the 1961 Census and the 16th and the 17th Rounds of the NSS*

	Males	Females
1961 Census	3.25	1.48
NSS 16th Round	2.40	2.64
NSS 17th Round	3.02	3.31

Compared however to the estimates of unemployment derived from the Live Registers of the Employment Exchanges, the Census estimates of the urban unemployed were low. The reasons for this divergence are perhaps similar to those noted in Chapter II while discussing the direct estimates of unemployment used by the Planning Commission. The definitions used in the 1961 Census cannot be said to have caused an undue bias towards classifying as "employed" those engaged in the *non-agricultural sector*, since employment in this sector is generally more stable than in agriculture and a person reported as working on "at least one day during the fortnight preceding the day of enumeration" may indeed be presumed to have been in some kind of employment. On the other hand, persons who register with Employment Exchanges probably have a longer perspective and seek more stable and remunerative opportunities for work than they already have.

4.10. It may be noted that, like the 1961 Census, the 1971 Census will initially classify an individual as a worker or a non-worker. Non-workers are proposed to be classified as (1) those engaged in household duties, (2) students, (3) retired persons or rentiers, (4) dependents, (5) beggars etc., (6) persons in institutions, and (7) other non-workers. The job seekers (unemployed) are proposed to be included under the last category. Unlike in a labour force survey, those who report their main activity to be other than work (non-workers) will not be asked by the Census enumerators whether they were "seeking or not seeking but available for work". Without such a question, a specific identification of persons as unemployed is not feasible. (With a reference period of one year, few persons in rural India would in any case be in the category of wholly unemployed). It would thus appear that the Census organisation has practically given up the idea of collecting data which could be considered as indicating unemployment. Presumably, this procedure has been adopted because the Census enumerators undertake their work on an essentially honorary basis and do not generally have the training to ask detailed probing questions to ascertain whether a person is unemployed. This is a valid reason, and therefore we do feel that the Census organization should not be burdened with the task of collecting data on unemployment.

#### *The National Sample Survey*

4.11. The various Rounds of the National Sample Survey undertaken since 1953 have helped to compile a very large body of data on the economically active population in India and have proved valuable for understanding the complexities of employment, unemployment and under-employment in the economy and of the problems involved in measuring them. The NSS Rounds falling in the period 1955—58 undertook a certain amount of experimentation with alternative concepts and reference periods. Since the 14th Round undertaken during 1958-59, the reference period has been stabilised at one week. The Standards for Surveys on Labour Force, Employment and Unemployment, issued by the Central Statistical Organisation in 1961, has subsequently recommended the general adoption of the labour force concept and a reference period of one week in all such surveys. In Chapter III we have discussed at length the present definitions and concepts and have suggested some changes. A few supplementary points are noted below.

4.12. The relatively low incidence of unemployment reported by the NSS has often provoked strong criticism. While the crude incidence of unemployment (i.e. the total unemployed as percentage of the total population of all ages, or as percentage of the total labour force of all ages) may be low, for the age groups 15—24 or 16—26, the incidence of unemployment in urban India reported by the NSS has often exceeded 7 per cent. Careful analytical studies of the NSS data could have highlighted this fact, which is of great importance for policy formulation. Even in rural areas, the incidence of unemployment in the ages of entry into the labour force has tended to be significantly higher than that for persons of other ages.

4.13. The rural labour force surveys conducted by the NSS were discontinued after the 17th Round. It was felt that the concept of unemployment as the term is generally understood, was not applicable to rural areas and the method of working out "equivalent full-time unemployment" from partial periods of unemployment was arbitrary. It was also felt that the information so derived was of no use for policy purposes. We have discussed these issues at some length in Chapter III and have suggested methods by which mis-interpretation of data collected from these surveys can be avoided. The NSS Rounds have indeed provided very useful information on various aspects of rural employment and under-employment. We would therefore recommend that the NSS should resume its rural labour force surveys, taking into account the various suggestions made in this Report.

4.14. We have noted in Chapter III that the sample size of both rural and urban surveys should be large enough to permit estimates of participation rates and the incidence of unemployment in different States of the country. Almost all the States, except West Bengal, canvass matching samples equal in size to the Central Samples, using identical concepts. (In a few States, the State Sample is only half as large as the Central). It is therefore theoretically possible to pool the data for improving the reliability of the estimates based on only the Central Sample. In practice, however, this valuable opportunity has not been availed of because the priorities for tabulation adopted by the States sharply diverge from those followed for the processing of the data collected for the Central Sample. While we recognize the inter-State differences in regard to the importance of various problems, problems of employment and unemployment are of sufficiently high importance to require close cooperation between the States and the Centre for the processing of these data.

4.15. Beginning with the 11th Round undertaken in August, 1956, the NSS decided to include among the unemployed and the labour force "those not seeking but available for work". Evidence available from the 11th to the 15th Rounds suggests that the proportion of such unemployed tends to be particularly significant for rural females. In the rural agricultural sector, with the predominance of self employment and unpaid family work and the relatively limited availability of opportunities for paid employment, persons might indeed find it futile to spend time and effort in seeking work and might give up active search for employment. The same is likely to be true of urban areas, where the female participation rates tend to be very low. The Standards for Surveys on Labour Force, Employment and Unemployment of the Central Statistical Organisation does not, however, provide a separate category for those not seeking but available for work in urban areas. We recommend that an attempt be made to identify separately the proportion of such unemployed in urban areas as well.

4.16. In the earlier Rounds of the NSS, the status of unemployment was considered possible for persons of all ages. Beginning with the 16th Round, however, persons below the age of 15, or 60 and above are no longer classified as unemployed even if they actively seek work. This seems inappropriate because in the absence of any social security system, the search for work by the very young and the very old would reflect the felt pressures for additional income. Even after all the data are collected it would remain open to the users to exclude from consideration, certain groups of unemployed if they so desire for their particular analysis. It is therefore advisable to collect the information, on the persons seeking or not seeking but available for work, for all persons irrespective of age.

4.17. One of our major suggestions, made in Chapter III, is the separate estimation of the level of unemployment and other labour force characteristics for each season/sub-round. So far, the sub-rounds of the NSS have generally been of an average duration of two months. The correspondence of these sub-rounds to seasons is not very clear or uniform. In fact, the peak and slack seasons in different parts of the country remain to be identified through statistical surveys. It is, therefore, advisable to obtain initially for two or three Rounds and subsequently at a certain interval, monthly estimates of labour force characteristics. The sole additional requirement for this purpose is appropriate tabulation and the concerned authorities should explore the possibility of accommodating this requirement in their tabulation plans.

4-18. The approach suggested by us in Chapter III will indicate the extent to which persons, who are usually (i.e., according to 'usual status') outside the labour force—such as students and house workers—undertake some casual work. However, this objective may not be fulfilled if the interviewers avoid asking the necessary questions to ascertain the labour force status of all sample respondents on each day of the reporting week. Due care should be taken to minimise this possibility.

4-19. It is believed that a section of the rural labour force moves to urban areas during the slack agricultural seasons and there is a similar movement of some urban workers to their native places during the peak sowing or harvesting season. The estimates of urban unemployment are perhaps affected by such seasonal movement. The available data do not permit an evaluation of this hypothesis. In some of the NSS Rounds, an attempt can usefully be made to ascertain the extent of such movement and its effect on the estimates of unemployment, with due attention to the difference in the characteristics of towns in different size classes.

4-20. It would be useful if the conventional classification of the population of each sex by age, activity and status or class of worker could include an additional variable about the number of hours of work during the reference week. It would indicate the difference, if any, in the hours worked by workers of different status categories, such as employers, employees, self-employed, and unpaid family workers.

4-21. The planning of the various surveys and tabulations of the NSS is done by a Committee consisting of officials of the State and Central Governments and the Technical Wing of the NSS. We feel that the inclusion of non-official experts from universities and research institutions interested in the use and interpretation of empirical data on the subject will contribute substantially to improvements in the concepts, procedures and tabulation plans adopted.

4-22. Long periods often elapse before the collected data are tabulated and the draft reports are published. It is obvious that empirical data lose much of their usefulness for understanding the trends in the economy and for policy formulation by such delayed tabulation. While we recognize the physical constraints in processing the data for a national sample in a country as large as India, we recommend immediate efforts to shorten the time interval. The disadvantages of delay in the publication of reports can also be mitigated to some extent if the draft reports are made available to universities and research institutions for comments and study as soon as the draft reports are prepared.

#### *Employment Market Information and Employment Exchange Data*

4-23. A major source of information on employment data on a quarterly basis is the Employment Market Information (EMI) programme of the Directorate General of Employment and Training (DGET), Ministry of Labour and Employment. This programme was taken up on a pilot basis during the Second Plan period. It has been strengthened since 1960 by the provisions of the Employment Exchanges (Compulsory Notification of Vacancies) Act, 1959, under which all establishments in the public sector (except the Defence Ministry and its establishments including the armed forces) and non-agricultural establishments in the private sector employing 25 or more workers, are covered. From March, 1965 onwards, data on employment in all public sector establishments and those private establishments in the non-agricultural sector which employ 10 or more workers are also being collected. Once in two years, employment data are collected from still smaller private sector establishments employing 5—9 workers.

4-24. The Employment Market Information programme, however, covers only some sectors of employment in the economy. In the case of public sector all establishments irrespective of their size are covered. However, in the case of private sector it excludes smaller non-agricultural establishments, agriculture, small plantations and private construction activities. This means, in particular, that self-employed persons and unpaid family workers are not covered. However, the data have a fairly wide coverage of establishments offering wage and salaried employment in the urban sector.

4-25. The response from the employers, both public and private, in regard to the information asked for under the programme is said to have improved over the period. According to the data available for March, 1969, there were 16.63 million employed persons in the establishments covered; 10.03 million were in the public sector and 6.60 million in the private sector. The figures are available

for States for sectors such as plantations, mining and quarrying, manufacturing, construction, electricity, trade and commerce, transport and communications, and services, classified under a three-digit code.

4.26. The main advantage of the Employment Market Information data lies in their being able to provide some "quick estimates" of organised employment in each State as well as for the country as a whole. Their wide coverage of wage and salaried employment in the urban sector adds further significance to the trends revealed by them. The EMI data must, therefore, be regarded as an extremely useful and important barometer of changes in the employment situation in urban areas.

4.27. The National Employment Service also provides information regarding the number of Employment Exchanges, applicants registered with them at the end of each calendar month, fresh registrations, vacancies notified and placements effected. These data are available with a relatively short time lag of about two months. With the steady increase in the number of Employment Exchanges, the National Employment Service now covers practically all the districts. At the end of June, 1969, there were 409 Employment Exchanges; over 3.1 million persons were on the Live Register, including about 1.3 million job-seekers with educational qualifications corresponding to matriculation and above.

4.28. As mentioned earlier, the data relating to persons on the Live Register, have, however, certain limitations for attempting estimates of unemployment. The Employment Exchanges are located mainly in the urban areas. All the unemployed persons in those areas do not, however, register themselves in the exchanges. Nor are all the persons registered in the exchanges necessarily unemployed persons. Some are already employed and some are full-time students who would usually be classified as outside the labour force in most surveys or censuses. The Live Register figures represent also a mixture of both rural and urban job-seekers, since some persons normally resident in rural areas also register themselves in the exchanges; the proportion of the two components are not known with any precision and may vary over time. Further, some persons probably register themselves at more than one exchange and no estimates are available regarding such multiple registrations. Changes in the number of registrants could also be simply due to increasing or decreasing prospects of employment, and therefore, in principle some adjustments will have to be made for their psychological effect on the registrants before drawing any conclusions about the trends in the numbers actually unemployed.

4.29. Precise quantitative adjustments for each of the factors noted above are, however, by no means easy. As indicated earlier, a recent DGET survey of a sample of about 18,000 job-seekers on the Live Register on March 1, 1968, has shown that (a) 34.4 per cent of them were normally resident in rural areas; and (b) only 49.6 per cent of the urban registrants were unemployed, the rest being already in employment (43.5 per cent) or students (6.9 per cent). The urban labour force surveys of the NSS also provide some information on (i) the proportion of the total unemployed persons in the country who are actually registered with the exchanges, and (ii) the proportion of employed persons registered with the Employment Exchanges seeking better employment. According to the 20th Round of NSS, 38.36 per cent of the urban unemployed were registered with Employment Exchanges. If the Employment Exchange data on those seeking employment are corrected in the light of the above findings, the 3.01 million persons on the Live Register at the end of 1968 would correspond to total urban unemployed of approximately 2.56 millions.<sup>1</sup>

4.30. The adjusted figures are particularly sensitive to the values of (a) the proportion of urban registrants who are actually unemployed and (b) the proportion of urban unemployed who actually registered with Employment Exchanges. The estimates of the latter proportion have fluctuated between 33.33 per cent (17th Round) and 43.38 per cent (21st Round) in the recent NSS surveys of the urban labour force. If the estimate based on the 21st Round is used for adjustment, the 3.01 million job-seekers on the Live Register at the end of 1968 would correspond to about 2.25 million urban unemployed. If the true proportion of unemployed among the urban registrants were 40 per cent (instead of 49.6 per cent reported by the DGET survey), and the 21st round estimate of the proportion of urban unemployed registered with exchanges is valid, the estimate of urban unemployed at the end of 1968 would be 1.81 million. These illustrative figures indicate the need for efforts to obtain more information, with an appropriately large sample, on the values of various correction factors. However, for reasons spelt out in Appendix III even such corrected estimates based on the Employment Exchanges data have to be treated with caution and cannot be

<sup>1</sup>See Appendix III.

regarded as reliable indicators of urban unemployment. It is important to bear in mind that the primary concern of the Employment Exchanges is to bring together such job-seekers as have the necessary knowledge and motivation to go to them, whether they are unemployed or already in employment, with employers belonging to certain specified categories. The estimates of unemployment they can provide are a by-product, and will continue to be subject to limitations for some time to come.

4.31. In the light of our discussion of the EMI and the Employment Exchange data, we would, however, suggest the following improvements :—

- (1) The EMI should aim at covering all establishments using power and employing 10 or more workers as well as establishments not using power but employing 20 or more workers (i.e. the "factory" establishments). At the same time, figures for establishments employing 25 workers or more should be provided separately. The advantage of such a procedure would be that, from time to time, the EMI data could be fruitfully compared with the data thrown up by the Annual Survey of Industries (ASI) for sectors common to both the EMI and the ASI. This is particularly necessary on account of the serious problems involved in keeping the list of establishments up-to-date and because the ASI, unlike the EMI, relies on trained investigators who interview all the respondents. This would provide a valuable cross-check on the EMI data and ensure that it is an efficient and sensitive barometer of changes in the urban employment situation.
- (2) The EMI should also separate urban establishments from the rural in their tabulations, so that we would have separate figures relating specifically to the urban sector.
- (3) Since the EMI data are an important "barometer", attempts should be made to collect the data by the interview method (as in the case of ASI) instead of the present postal method. This would improve the response and the quality of the data collected. This might involve important administrative and financial considerations ; given the great potentialities of the EMI data in our statistical system, it still seems worthwhile. Perhaps, as an initial measure, the interview method might be restricted to establishments employing 25 or more workers.
- (4) The need to conduct frequent surveys to estimate appropriate correction factors to adjust the Employment Exchange data is obvious. The distribution of registrants on the Live Register by age, sex, educational levels, rural-urban residence, and employment status (employed or unemployed) is likely to vary over time, and correction factors would tend to get out of date very rapidly. It is essential that correction factors be available for such categories of registrants at the State level. This would probably require a large sample from the Live Register. We recommend that such surveys should estimate also the extent of multiple registrations, and attempt to provide reliable and up-to-date correction factors so that the rural registrants as well as the urban employed and the student registrants could be separately estimated and excluded from the urban unemployed.
- (5) It is important that efforts be made to ensure that the personnel employed for such surveys are independent of those in the Employment Exchanges, so that respondents may not be unwilling to admit that they are employed persons or students.
- (6) Some research workers from universities and other academic institutions should be associated with the planning and analysis of these surveys.
- (7) The educational level classification used in the NSS and in the Live Registers of the Employment Exchange should be uniform in order to facilitate the application of the relevant correction factor to convert urban unemployed registrants into urban unemployed persons. In particular the tabulation of job-seekers by sex, age-group, and educational level should distinguish illiterates from literates "below middle school standard".
- (8) The renewal period for registration should be uniform all over the country. At present, it varies between States and even within a State as between those with different educational attainments. Uniformity is essential if the data are to be comparable and useful for interpretative purposes of the kind we have in mind.

4.32. In conclusion, we note that the decennial Censuses provide information on the size and composition of the Indian labour force once every ten years, while the NSS rounds attempt to furnish the material to build up a time series based on annual data. A suggestion has been made that an intensive quinquennial survey devoted specifically to the measurement of the size and composition of the labour force and unemployment would be a valuable supplement to the pool of available data. We have already noted in Chapter II (para 2.21) the uses to which such quinquennial surveys can be put for estimating the employment effects of the Plans. However, the quinquennial surveys are subject to a possible disadvantage that results might be affected by various contingencies, such as a drought if the latter coincide with the year of survey. An alternative seems to be the pooling of the NSS data collected during successive Rounds and preparation of a kind of moving average series. The reference point of such a series would lie at some time in the past ; for example, an average picture built up from five annual Rounds would have its reference point approximately at the mid-point of the quinquennial period. However, with a reasonably large sample size, (that would be necessary also to meet the various requirements outlined by us earlier), the pooling together of the data for a five-year period would permit separate estimates of different labour force characteristics for States and other regions, that are presently wanting. The NSS field staff has had the training and experience in collecting data on various aspects of the labour force for a long time ; and it would probably be a more effective agency than any special cadre of investigators appointed for the quinquennial survey. Of course, if the NSS data for successive Rounds are to be pooled together, frequent changes in the concepts, such as have been made in the past, will have to be kept at a minimum or else, an attempt will need to be made to obtain appropriate adjustments factors through a simultaneous use of the alternative approaches. If these factors are recognised adequately, a continuous series built up from the NSS data is likely to be more useful than *ad hoc* quinquennial surveys.



## CHAPTER V

## SUMMARY AND CONCLUSIONS

We have carefully looked into the estimates of unemployment worked out for the previous Plans and the data and methodology used in arriving at them. Our considered view is that the supporting data available for the estimates were not adequate and the conclusions based on them were, therefore, unavoidable inaccurate. In the light of the experience gained it is possible to suggest a basic change in approach and the methodology for the analysis of the problem of unemployment and the presentation of the estimates.

*Methodology and Framework*

5.2. At the outset, it is important to recognise that many of the limitations of the estimates of labour force, employment and unemployment are inherent in the socio-economic conditions of our country and cannot be wholly overcome by conceptual refinements or improvements in the technique of estimation. We appreciate the desire on the part of the lay public for precise estimates on the vital problems of employment and unemployment. It should, however, be made clear that, in the nature of the socio-economic situation, such precision is not possible. Of course, this should not be an excuse for neglecting the task of compiling and presenting the relevant information as intelligently and precisely as is possible under the circumstances. Incidentally, even in a country like Japan with her pronounced predilection for quantitative estimates, "it is difficult to find a single estimate of the rate of unemployment". The Japanese planners go on changing even the definition of labour shortage as the economy progresses. Indeed it has been observed that "the Japanese regard Western-style unemployment statistics as nonsense."<sup>1</sup>

5.3. Basic to the issue of unemployment is the very concept of labour force. It is now realised that the concept as adopted in developed economies is unsuitable for an economy like ours with its preponderance of self-employment and production within household enterprises. Attempts made towards refinement of the concept to make it more appropriate for our economy—e.g. by asking those who are not seeking work, whether they are 'available' for work—have not solved the basic difficulties. The main problem is that a sizeable proportion of labour input in household enterprises is provided by some members of the family who have only a partial attachment to the labour market in the technical sense of the term. They work in the family enterprise, without receiving any wage. They work on family farms and similar enterprises as and when required, and when they do so, technically they become part of the "labour force"; but when there is no such work, they generally revert to household work. In all probability, many of them would neither seek work nor be available for "outside" work. Thus, while their inclusion in labour force—and in the calculation of unemployment—becomes misleading, their total exclusion would also fail to reflect the reality of the economic situation.

5.4. In an economy like this, there is very little open or outright unemployment, but there would be considerable seasonal unemployment and/or under-employment. The distinction between these two features—of overt unemployment and under-employment within household enterprises—should be clearly recognised, and the estimates pertaining to them should not be aggregated into estimates of full-time unemployment. Not only are the two phenomena analytically distinct, the remedial action needed for each of them is also quite different. Under-employment indicates the possibility of fuller utilisation of the available resources. The social significance of the problem, which gives urgency to finding speedy solutions for it, must, however be traced to the need for raising the income of the under-employed. The under-employed have come kind of opportunities for work which, however, do not yield adequate income. Higher productivity in existing occupations can raise incomes without necessarily increasing the quantum of employment. Moreover, given a choice, the under-employed would perhaps prefer more work in their existing occupations rather than seek or avail of opportunities elsewhere. This has important implications for employment and investment policies. The planning authorities would, therefore, distinguish clearly between the overtly unemployed and the under-employed, and should attempt separate estimates of the two categories. The question of the *extent* of under-employment is important but its measurement solely in terms of man-years appears to be inappropriate; because the income level of the under-employed, the

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<sup>1</sup>*The Economist* May 27, 1967, Vol. CCXXIII, No. 6457, pp. xv to xvi.



nature of the additional work desired by them and the terms on which their labour will in fact be available are all relevant aspects of the problem.

5.5. In the light of what is said above, it is our view that estimates of growth in the labour force, of additional employment generated by the Plans and of unemployment at the end of the Plan period, presented in one-dimensional magnitudes, are neither meaningful nor useful as indicators of the economic situation. We recommend that this practice be given up. In our complex economy, the character of the labour force, employment and unemployment, is too heterogeneous to justify aggregation into single-dimensional magnitudes. We, therefore, recommend separate estimation of different segments of the labour force, taking into account such important characteristics as region (State), sex, age, rural-urban residence, status or class of worker and educational attainment. An attempt could then be made to identify the demand likely to be generated for particular categories of labour as a result of various developments envisaged under the Five Year Plans. Such effort should concentrate initially on sectors where the personnel or labour requirements can be clearly recognised. At the end of the Plan the initial estimates should be compared with the actual employment created; the reasons for the difference if any, should also be identified. In the meanwhile, detailed studies should be made continuously to permit more precise estimates of employment generated in other sectors of the economy.

5.6. As a result of the various suggestions made by us, two types of improvements will be brought about in the estimates of unemployment. First, even without a change in the concepts of employment and unemployment currently in use, we shall obtain separate estimates of the level of unemployment during different seasons of a year among various homogeneous groups of the labour force and/or population identified through the 'usual status' approach.

5.7. Secondly, we have suggested a change in the present procedure of classifying a person as employed or unemployed. Our alternative envisages the identification of the employment and labour force status of the population studied in various surveys on the basis of the activity of the respondents on *each day* during the reference week. The estimate obtained under this approach will indicate the average rate of unemployment during the season, or in other words, the extent of under-utilization of the available labour supply in the rural economy. It will not indicate the number of unemployed persons or the requirement of additional full-time jobs. The latter figure can be estimated through some supplementary questions about the duration of unemployment, etc., to be asked to those who report unemployment throughout the week. If our suggestions are accepted, the resulting estimates of the level of unemployment in different sectors of the economy will not only become more realistic but will be more useful for the formulation of appropriate public policy.

5.8. We have also proposed some additional probing questions to be asked to persons in various categories of the labour force. These questions are intended to enhance our understanding of the factors underlying the changes taking place in the labour market. From the response to these questions, we shall be able to gain an insight into (a) the reasons for the apparent withdrawal from the labour market by many unpaid family workers after seasonal work and (b) the extent to which the employed persons in urban areas actively seek alternative or supplementary jobs, and the underlying reasons.

5.9. The problem of unemployment is most serious for workers who seek wage employment. As such, it would be appropriate to take special care to collect information in greater depth and at short intervals regarding their position. In the course of development, both their proportion (in the labour force) and their characteristics are likely to change. In any case, the impact of economic pressures is felt mainly and directly by this class. We, therefore, suggest that special studies should be made continuously of the conditions of the employee class, suitably defined, in various parts of the country and in different sectors of the economy, taking into account the frequency of cropping, the supply of irrigation facilities and the pattern of land use, the nature of the industry, etc. Simultaneously, information should also be collected on wage rates for different categories of labour in selected centres; such data could be useful indirect indicators of the employment situation.

5.10. We have examined at some length the data on the size and composition of the labour force and the level of unemployment available from the (1) Population Censuses, (2) the National Sample Survey (NSS) and (3) the Employment Market Information and the Employment Exchange data collected under the auspices of the DGBT. We have suggested some improvements in the collection, tabulation and analysis of the information which may henceforth be obtained by these agencies. These suggestions are contained in Chapter IV above.





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## APPENDIX I

A NOTE ON EMPLOYMENT AND UNEMPLOYMENT CONCEPTS ADOPTED IN  
THE NATIONAL SAMPLE SURVEY

by

*Sudhir Bhattacharyya*

National Sample Surveys on employment and unemployment, undertaken during several years past, have had three major objectives, namely (i) to make a quantitative assessment of visible and open unemployment prevalent in the country, (ii) to find a statistical measure of the nature and magnitude of under-employment, which pervades the entire economy and imposes forced idleness upon a segment of the economically active population and (iii) to get a picture of the pattern of employment in all its facets. In other words, these surveys were designed to obtain a picture of the magnitude of the problem in concrete terms and to analyse statistically how the available human resource distributes itself in various channels of employment or, for that matter, fails to find a place in any one of them.

2. This raises the question of choice of basic postulates or appropriate concepts. Concepts, it may be said, are a kind of detecting radar and are an aid to both diagnosis and prognosis. It is upon their comprehensiveness and applicability that the success of socio-economic surveys depends. Therefore, a brief account of the earlier exercises for evolving a suitable set of concepts is pertinent here.

3. Information on employment and under-employment was collected for the first time, on all-India basis, in the 9th Round of the National Sample Survey during May to November, 1955. Since then, the NSS has experimented with different concepts for collecting data on employment and unemployment. It is interesting that the NSS started with a mixed or modified 'gainful worker' or 'usual status' concept and finally came to adopt the "labour force" concept.

4. The survey planners were already familiar with the 'means of livelihood' approach of the Indian Census. Cognisable change in the Indian economy even over a long period is so small that a static 'gainful worker' or 'usual status' concept, which assumes in general a normal attachment of the population of working age to some gainful occupation, was considered quite appropriate for the prevailing conditions.

5. In the NSS 9th round the 'gainful worker' or 'usual status' concept was used for the classification of persons into (1) 'gainfully employed', i.e., with gainful work, (2) unemployed or without gainful work and seeking work and (3) 'not in labour force' or without gainful work. The term 'industrial status' was used to indicate the usual status of a person and related to usual activities of a person without reference to any specific point or (short) period of time. It was derived from the dominant pattern of activities of a person that prevailed over a long period, generally a year. The pattern might comprise more than one activity, undertaken either concurrently or in succession or alternation. In cases where a person followed multiple activities, the most important activity, from the point of view of the share of total time spent on it during the period under reference (a year) was regarded as his major activity; other activities were regarded as minor.

6. Besides the above-mentioned information on 'usual status', the data on specific activity on the day preceding the date of enquiry, of those persons whose 'usual status' had already been determined by the 'usual industrial status' criterion were also collected. This was intended to provide further details regarding activity of a person on the day of reference. Persons reporting 'with gainful work' as their usual status were asked whether they were (1) at work or (2) not at work on the day of reference. Persons reporting 'seeking work' as their usual status were asked whether they sought paid employment and other employment (1) for the first time or (2) not for the first time. Persons reporting 'without gainful work' as their usual status were asked whether they were (1) available for gainful work or (2) not available for gainful work. Person reporting usual industrial status 'with gainful work' as their major activity were considered 'employed' and those reporting 'seeking work' as their major industrial status were regarded as 'unemployed'. Unfortunately, the tabulation priorities did not permit the analysis of the data collected with a reference period of one day.

7. In the NSS 10th Round, December, 1955—May, 1956, the concept of 'usual status' was retained but the reference period chosen was very short, one day. However, persons with stable and continuous employment were classified as 'with gainful work' even if they were without work on the reference day. But those who were usually in casual or seasonal employment were classified strictly on the basis of their activity on the reference day.

8. The usual status concept, which assumes almost the entire population of working age to be usually attached to some gainful occupation over a long period, minimises the chance of a person being classified as unemployed and only the chronically unemployed persons were likely to be identified as such under the above approach. Ordinarily, such persons would be found largely in the urban areas, particularly the big cities. In small towns and rural areas, where a large section of the population works in household enterprises or on own account in traditional business or profession, few would get or lose jobs and most of them would not openly seek new jobs even during the lean season. Perhaps, the demand for more gainful work, in so far as it is felt by members of the household, may also be in part only, for such work as can be made available within the household.<sup>1</sup> A general distrust about the usefulness of efforts to find a job acts as a deterrent against their openly seeking employment. Therefore, the criterion of "seeking work" cannot rope in all the persons who are essentially unemployed. This was true not only for those engaged in household productive units but also for those who worked in other enterprises as employees. In the absence of an organised labour market, the adoption of 'seeking work' criterion for identifying unemployed persons is thus bound to be ineffective. The modification introduced in the definition in the NSS 10th round, especially to treat casually and seasonally employed persons separately, could help to bring within the net at least the casually unemployed and the seasonal unemployed persons. But the reference period was probably too short for the purpose. The results of 9th and 10th Rounds of NSS given in Table (1) below illustrate the point made above.

TABLE 1

*The Distribution of Rural and Urban Population of India by Activity Status according to the 9th Round (May—November, 1955) of the National Sample Survey*

*10th Round (December, 1955—May, 1956)*

Serial No.	Industrial Status	Rural			Urban		
		Males	Females	Persons	Males	Females	Persons
1	Gainfully employed ..	59.18	26.56	43.21	51.35	11.58	32.44
2	Unemployed ..	0.51	0.06	0.29	3.13	0.36	1.82
3	Labour Force ..	59.69	26.62	43.50	54.48	11.94	34.26
4	Not in Labour Force ..	40.31	73.38	56.50	45.52	88.06	65.74
5	Total ..	100.00	100.00	100.00	100.00	100.00	100.00
1	Gainfully employed ..	57.03	21.15	39.32	51.72	11.58	32.68
2	Unemployed ..	1.17	0.57	0.87	3.31	0.51	1.98
3	Labour Force ..	58.20	21.72	40.19	55.03	12.09	34.66
4	Not in labour force ..	41.80	78.28	59.81	44.97	87.91	65.34
5	Total ..	100.00	100.00	100.00	100.00	100.00	100.00

<sup>1</sup> M. N. Raj, "Employment and unemployment in the Indian Economy: Problems of Classification, Measurement and Policy", *Economic Development and Cultural Change*, Vol. 7, No. 3, Part I, April 1959, p. 289.

9. Realising that the 'gainful worker' or 'usual status' concept will not be an effective tool for measuring the seasonal fluctuations in employment and unemployment in the otherwise almost static economy and will only reflect the traditional pattern of employment, the NSS adopted the 'labour force' concept beginning with the 11th round. The 'labour force' concept originated in the West and was designed for essentially full employment economies in which unemployment tends to be partly frictional and partly a result of periodical fluctuations in effective demand. The labour force was, therefore, measured with a short reference period of week, a fortnight or a month, which would highlight the periodical changes in employment or unemployment and also minimise the reporting errors due to difficulties of recall.

10. The labour force concept adopted by the NSS for employment and unemployment surveys for the 11th and subsequent rounds was, somewhat different from the western one. The modification of the labour force concept was deemed necessary because of :

- (1) the existence of a labour market with an increasing number of job-seekers in the organised sector of the economy in urban areas ;
- (2) the widespread seasonal unemployment in agriculture ;
- (3) a probable large number of people both in rural and urban areas who do not actively seek employment but are available for work.

11. According to this modified concept a person having some gainful employment, however nominal it may be, on the reference day (11th, 12th and 13th Round) or on at least one day during the reference week (14th and 15th Round) was treated as 'employed'. A person without any gainful employment throughout the reference period and either seeking work, or, if not seeking, at least available for work during the reference period (11th, 12th and 13th Round) or on any one of the seven days of the reference week was treated as 'unemployed'. The major difference between the NSS labour force concept and the one current in Western countries lay in the introduction of a new category of 'not seeking but available for employment' for identifying those persons who did not openly seek jobs but nonetheless would be available for gainful work if any opportunity was provided to them.

12. It might be recognised that the opportunities for active search for employment in the country are very limited. As against 2,700 towns in the country, the number of Employment Exchanges at the end of 1968 was only 405. Therefore, many of the unemployed persons cannot express their desire for employment by registering their names with Employment Exchanges. Secondly, in view of the endemic nature of the malady, a large number of people abandon their efforts at seeking work after their initial attempts fail. Under the circumstances, an attempt to identify this category of people and classify them as unemployed under a specific rubric in the conceptual framework seems to be a move in the right direction.

13. Apart from this adaptation of the labour force concept, the adoption of a short reference period has provided the means of sensing the seasonal changes in employment both in rural and urban areas. An assessment of seasonal fluctuations could be possible also because the NSS sample households selected for detailed enquiry, during each sub-round were chosen at random.

14. The effect of the modification of the labour force concept can be seen in the survey results given in the Table (2) below. The inclusion of persons 'not seeking but available for employment' among the unemployed raises significantly the estimate of the incidence of unemployment in rural areas. The 13th Round data suggested that this category might perhaps be important in urban areas as well but other Rounds do not confirm this impression.

15. An attempt was made to streamline the 'labour force' concept further when in 1961, the CSO prepared the Standards for Surveys on Labour Force, Employment and Unemployment for use in all surveys on this subject in the country. According to the 'Standards' the 'employed' category consists of :

- (i) all persons who had worked for pay, profit or family gain on at least one day during the reference week on some economic activity ;
- (ii) all persons who had jobs or own enterprises, professions or vocations but were temporarily absent from work during the reference week for reasons of illness, injury or other physical disability, bad weather, strike or lock-out, paid lay off, paid vacation or

rest or recreation or any other cases, including social or religious, necessitating temporary absence from work ;

- (iii) unpaid helpers who had assisted in the operation of an economic activity on at least one day during the reference week.

Paid apprentices are to be included under (i) or (ii), as the case may be, depending on whether they worked during the week or not. Unpaid apprentices are included under (iii).

16. The recommended criterion for identifying 'unemployed' persons, however, is different in urban areas from that prescribed for rural areas. The 'unemployed' in urban areas consist of all persons who, having no jobs or enterprises of their own, had not worked even on a single day during the reference week and were currently looking for *full time* work. They include :

- (i) persons whose employment or means of self-employment was discontinued, whether temporarily, indefinitely or permanently, except for such reasons as those mentioned in the definition of sub-category (ii) of the 'employed' category ; and

- (ii) persons who were looking for work for the first time ;

but excludes persons below the age of 14 (i.e., persons who have not completed 14 years of age) and above the age of 60 (i.e., persons who have completed 60 years of age or more). 'Full time' means the normal full-time hours of work for the type of work (occupation) looked for and may differ from occupation to occupation. In case of doubt, six hours or more per day may be considered as full time. The under-mentioned persons are to be regarded as "looking for work" :

- (a) those who were on the Live Registers of Employment Exchanges at the end of the reference week ;

- (b) those who had put in written applications for jobs during the two months preceding the end of the reference week and were awaiting the results of the applications ;

- (c) those who had contacted prospective employers at least once during the reference week for employment ;

- (d) those who could not contact prospective employers during the reference week because of ill-health, disability, bad weather or similar other reasons, provided they had contacted them for jobs before the above-mentioned contingency and, in any case, within the preceding two months ;

- (e) those who did not make any tangible efforts to secure employment as per (a) to (d) above under an expectation of recall to jobs which they had temporarily left, or under a belief that no alternative opportunities existed in the locality or other similar reasons that could not be helped.

17. For rural areas the 'unemployed' consist of all persons who, owing to lack of work, had not worked even on a single day during the reference week and were currently available for work. They include :

- (a) persons seeking work through Employment Exchanges, intermediaries, applications or direct contacts ; and

- (b) persons not seeking but available for work at current rates of remuneration in prevailing conditions of work.

18. The above concepts embodied in the CSO 'Standards' have been used in the NSS surveys since its 16th Round. Since separate rural surveys on employment and unemployment were dropped in the 18th and subsequent Rounds the immediate impact of this change was felt only in urban surveys. The net effect of the exclusion of persons 'not seeking but available for work' from the category of unemployed and of the introduction of an age restriction has been to lower the estimates of the level of unemployment in urban India. This is evident from the data based on the 16th and subsequent Rounds of the NSS, given in Table (3) below.

19. The estimate of unemployed based on the integrated household schedules 16 canvassed in 19th Round of the NSS<sup>1</sup> suggests that the perceptible decrease in estimates of unemployed persons

<sup>1</sup>The NSS Report No. 201 (Draft), Tables with Notes on Employment and Unemployment in Rural and Urban Areas of India, Calcutta, 1969.

in urban areas might be due to (i) the withdrawal of "available for work" criterion and (ii) the introduction of an age restriction for identifying unemployed persons in urban areas. In this schedule, the CSO definitions recommended for rural areas were used to identify the labour force status of the sample respondents. As shown in Table (4) below, the level of unemployment indicated by this schedule (1.18 per cent) was almost twice that reported by the urban labour force survey during the same round (0.61 per cent ; See Table 3). Of course, the number of sample persons interviewed for the Integrated Household Schedule of the 19th Round was only 23,720 and the sampling error of the estimates is likely to be higher than that of estimates based on the urban labour force survey. Moreover, the proportion of unemployed 'not seeking but available for work' among all unemployed, reported by the Integrated Household Schedule, both for males and females, exceeded substantially the corresponding proportions observed during the 11th to 15th Rounds. Therefore, the subject needs further investigation.

20. It has been noted earlier that in the absence of an organised labour market, persons without jobs or gainful work may not always actively seek jobs and their true status might be ascertained better through a probe into their availability for work. The effectiveness of this approach has been questioned both by Prof. Gunnar Myrdal<sup>1</sup> and Prof. K.N. Raj. They have argued that the use of this 'available for work' criterion without reference to any wage rate is meaningless and the data based on this approach will be a kind of 'hotch potch' aggregate.<sup>2</sup>

TABLE 4

*Percentage Distribution of Population in Urban Areas by Labour Force Status and Sex,  
19th Round Integrated Household Schedule Data*

Labour Force Status	Male	Female	All persons
Employed	49.93	12.12	32.40
Unemployed	(1.35)	(0.98)	(1.18)
(i) Seeking work	0.76	0.22	0.51
(ii) Not seeking and available	0.59	0.76	0.67
Labour Force	51.28	13.40	33.58
Not in labour force	48.72	86.60	66.42
Total	100.00	100.00	100.00

21. It is incorrect to assume that reference to any wage rate was not made while ascertaining 'availability for work'. A close study of the definitions in use would show the validity of this contention. While answering the question whether he is available for any gainful work, the person concerned will always consider the issue in relation to expectation of reward, i.e., the wage rate and his mobility inertia etc., connected with it.

22. The NSS approach for the measurement of under-employment has remained the same throughout the period. On this issue, there is basically no divergence of opinion among the analysts in the country and abroad. According to the Ninth International Conference of Labour Statisticians, "under-employment exists when persons in employment who are not working full-time would be able and willing to do more work than they are actually performing." This phenomenon is characterised "visible under-employment, which involves shorter than normal periods of work and which is characteristic of persons involuntarily working part-time".

<sup>1</sup>Gunnar Myrdal, *The Asian Drama*, Vol. III, Partheon, New York, 1968, Appendix 16.

<sup>2</sup>K.N. Raj, *op. cit.*

<sup>3</sup>C.S.O. Standards for Surveys on Labour Force, Employment and Unemployment, 1961.

23. Prof. P.C. Mahalanobis has suggested that "one can use a concept of a hypothetical or normal full working time, and enquire whether a person is active for the full normal working time or for only a fraction of it<sup>1</sup>."

24. The concept of under-employment as developed in the NSS was based on the same idea. In NSS, however, considering the operational feasibility of collecting the data an attempt was made only to measure the extent and magnitude of current under-employment. For this purpose, data have been collected on the labour time disposition of each gainfully employed individual in terms of days and hours of work in a week and the difference between the actual hours worked and an arbitrarily fixed norm has been measured. But this difference by itself would not be a satisfactory measure unless it is related to only those persons who reported working less than normal hours and at the same time were available for additional work during the same reference period for which data on hours of work were collected. So along with the collection of data on actual hours worked, data on availability have also been collected in all the Rounds of the NSS.

25. It is admitted that some objective element may creep in the collection of such information. The data on hours or days at work in an economy, wherein the idea of working hours is not as meaningful as in an organised economy, may not be accepted without reservations. However, in the absence of any other measure, an approximate idea of the extent of involuntary part-time work might help to understand the broad dimension of the problem. Supplemented by other information on fluctuations in wage rates etc., it might facilitate the task of locating the areas of acute under-employment.

26. While concluding this review of the statistical exercises attempted by the NSS to evolve suitable concepts for a quantitative measurement of the state of employment, unemployment and under employment in the country, the following points deserve due attention :

- (1) In a vast country like India, in which agriculture employs a majority of the population and where bulk of the production is carried on in household enterprises, a unique concept or approach may not provide correct picture of the actual state of affairs ;
- (2) The 'labour force' concept adopted in the industrially advanced countries, with a suitable modification to properly identify those who do not openly search for jobs but are available for gainful work, may be used for surveys in big cities and larger towns, say with a population of 50,000 and above ;
- (3) The 'gainful worker' concept, with a suitable modification to provide for measuring the seasonal fluctuations in employment in the countryside may be adopted for the rural areas. Measurement of under-employment, i.e., the deviation from the norm in qualitative terms for those who work for less than normal hours involuntarily, should be the prime objective of employment surveys in this sector ;
- (4) The problem of landless agricultural or rural labour has to be tackled separately. Their problem is somewhat different from that of the industrial proletariat in the urban sector because unlike the urban job-seekers, they have some typical characteristics arising out of their commitment to rural and agricultural economy ;
- (5) A proper conceptual framework should attempt to identify persons who are only casually and incidentally engaged in some gainful work either in the household enterprises or in other activities. The current concepts place them in the category of 'employed', a procedure that does not appear to be proper.

<sup>1</sup>P.C. Mahalanobis, "Concept and Measurement of Unemployment" in V.K.R.V. Rao (Ed.), Employment and Unemployment, Allied Publishers, Bombay, 1968, p. 2.

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TABLES 2 AND 3

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TABLE  
Percentage Distribution of Population by Sex,

Activity Status	11th and 12th Round						13th Round		
	Rural			Urban			Urban		
	Male	Female	All Persons	Male	Female	All Persons	Male	Female	All Persons
1	2	3	4	5	6	7	8	9	10
Gainfully employed persons ..	52.59	21.12	37.03	48.62	12.00	31.27	48.99	11.73	31.38
Seeking Employment ..	1.69	1.18	1.44	3.66	0.69	2.25	3.10	0.81	2.02
Not seeking but available for Employment ..	0.79	1.03	0.91	0.31	0.14	0.23	0.52	0.42	0.47
Unemployed ..	2.48	2.21	2.35	3.97	0.83	2.48	3.62	1.23	2.49
Labour Force ..	55.07	23.33	39.38	52.59	12.83	33.75	52.61	12.96	33.87
Not in Labour Force	44.76	76.45	60.43	46.94	86.12	65.51	47.38	87.04	66.12
Not Recorded ..	0.17	0.22	0.19	0.47	1.05	0.74	0.01	0.00	0.01
Total ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Note.—Rural Labour Force Survey was not undertaken during the 13th Round.

TABLE  
Percentage Distribution of Population by

Activity	16th Round (July, 1960 -- June, 1961)			17th Round (September, 1961 -- July, 1962)		
	Male	Female	All Persons	Male	Female	All Persons
1	2	3	4	5	6	7
Gainfully employed ..	49.42	11.68	32.08	49.41	10.49	31.16
Unemployed ..	1.59	0.57	1.11	1.54	0.36	0.98
Labour Force ..	31.01	13.25	33.19	50.95	10.85	30.14
Not in Labour Force	48.63	86.35	66.43	48.40	88.47	67.19
Not Recorded ..	0.36	0.40	0.38	0.65	0.68	0.67
Total ..	100.00	100.00	100.00	100.00	100.00	100.00

[illegible]

3

18th Round (February, 1963—January, 1964)			19th Round (July, 1964—June, 1965)			20th Round (July, 1965—June, 1966)		
Male	Female	All Persons	Male	Female	All Persons	Male	Female	All Persons
8	9	10	11	12	13	14	15	16
49·32	10·20	31·05	49·22	10·11	30·96	48·10	10·09	30·40
0·96	0·25	0·63	0·95	0·24	0·61	0·92	0·26	0·61
50·28	10·45	31·68	50·17	10·35	31·57	49·02	10·35	31·01
48·19	87·31	66·46	49·40	89·01	67·90	50·78	89·36	68·75
1·53	2·24	1·86	0·43	0·64	0·53	0·20	0·29	0·24
100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00



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## APPENDIX II

## EMPLOYMENT AND UNEMPLOYMENT IN INDIA : A REVIEW OF SELECTED STATISTICS

by  
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The objective of this study is to review some of the important statistics on employment and unemployment in India.<sup>1</sup> The employed and unemployed together constitute the labour force, i.e., persons available for the production of goods and services in the community. The present study is intended to discuss some aspects of the size and characteristics or the composition of the Indian labour force, with somewhat greater attention to the characteristics of those classified as unemployed. More specifically, we shall deal with (a) the labour force participation rates, (b) the industrial occupational and status composition of those classified as workers for the gainfully employed ; (c) the conceptual background of different estimates of unemployment ; and (d) the characteristics of the unemployed reported by the major sources of data.

2. A comprehensive study of the composition of the labour force would include an analysis of (a) the demographic and social characteristics of the individuals, such as sex, age, marital status, educational attainment, rural-urban residence, and location (i.e. region or State) and also (b) the economic characteristics, such as the nature of work performed by them (occupation), the commodities or services produced by the establishment (if any) in which they work (industry), and their relationship with other workers (if any) in the enterprise (status). One might also attempt to examine (a) the quantum of work performed by the employed and the extent of their availability for work in terms of hours, to assess the underutilization of the available labour time or (b) their productivity and/or incomes to study the adequacy of returns or rewards to them in terms of various norms. The available statistics can be used to shed some light on almost all these facets of the prevailing situation ; but the present review is restricted to only some of them. Before we turn to the data, some features of the procedures of data collection used by the major sources may be noted first.

I  
THE MAJOR SOURCES OF DATA

3. The three major sources of data on the various aspects of employment and unemployment are (a) the decennial censuses ; (b) the various Rounds of the National Sample Survey beginning with 1952 ; and (c) the Employment Market Information (EMI) Programme and the Employment Exchange data collected and compiled by the Directorate-General of Employment and Training (D.G.E.T.) of the Ministry of Labour and Employment of the Government of India. Various other agencies also collect and compile useful data for particular sectors of the economy. The sources that regularly publish statistics on employment and related aspects have been listed below in Annexure I.

*The Census*

4. Among the data supplied by various sources, the census data are very widely used because they are available even for very small regional units, to some extent for every village. Also, subject to the problems of comparability of concepts and their actual execution in the field, an attempt can be made to study the time trends over a fairly long period of time. Of course, all the censuses have been conducted during February-March which are probably slack seasons in many parts of the country. The data collected by the NSS during some of its Rounds (particularly the 14th and the 15th and to a certain extent, the 9th) suggest a fair degree of seasonal variation in both the size and the industrial/occupational composition of the labour force in rural India.<sup>2</sup> However, prior to the 1961 Census, the census data on the economic activity of the population were collected on an 'usual status' basis, which would not be affected seriously by the seasonal factor. Also, the reference dates of the censuses have remained between 17th February (in 1881) and 18th March (in 1921). Therefore, unless particular areas were affected by droughts or similar contingencies, the seasonal factor would not affect the comparisons.

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<sup>1</sup>Some of the tables used in this study and Annexure I were prepared in the Labour and Employment Division of the Planning Commission. The author is indebted to Shri K.V. Iyer and his colleagues for their assistance. Shri P. Sengupta, Statistical Officer in the Directorate-General of Employment and Training, Ministry of Labour and Employment, has also been very helpful on many occasions. However, the responsibility for all errors in tables and their interpretation is solely author's.

<sup>2</sup>Pravin Visaria, 'Seasonal Variations in the Labour Force and Their Implications', cyclostyled.

5. Unfortunately, until 1961, the tabulation of the census data has been so restricted that except for the number of males and females working in different sectors of the economy, very few details are available about their characteristics. Besides, the census enumerators tend to be essentially honorary recruits drawn from the various Government services so the scope for probing questions, such as are necessary to ascertain the number of unemployed, tends to be severely limited. The attempt during the 1951 Census, by the three States of U. P., Bombay and Mysore to collect data on the number of unemployed was not successful. The same can perhaps be said of the 1961 Census although its data deserve careful examination.

6. The highlights of the census data on the extent of labour force participation and the changes in the industrial composition of the male working force in different States of India have been ably discussed by J. Krishnamurty.<sup>3</sup> Therefore, the discussion below in Sections II and III will be rather brief and will focus only on some selected aspects of the situation.

### *The EMI and the Employment Exchanges*

7. At the end of March, 1969, the EMI attempted to collect data on employment from nearly 1.43 lakhs establishments on the Employers' Register of the Employment Exchanges.<sup>4</sup> It covered all public sector establishments and also non-agricultural private sector establishments employing 10 or more workers, except in Jammu and Kashmir, and the Union Territories of Goa, Daman and Diu, and Andaman and Nicobar Islands. The EMI data on employment are tabulated by sex and also a three-digit industrial classification. The data are collected every quarter and depend on the co-operation of the respondents (approached through postal questionnaires), so that the range of information that can be collected is naturally somewhat limited. Also, the validity of estimates of employment in non-responding establishments is not known and has probably never been assessed. Yet, with some efforts to improve its coverage, the EMI promises to become an important source of "quick" information on the broad employment trends in the organised sector of the economy. The available EMI data have been analysed in the *Employment Reviews* for the period 1961—66, 1966-67, and 1967-68, published by the D.G.E. T. Our discussion of the EMI data will, therefore, be very brief.

8. The Employment Exchange data on the number of job-seekers on the Live Register are also widely used as indicating the extent of urban unemployment. They are based on voluntary registration by individuals with Employment Exchanges, located mainly in big towns. The broad data on the activities of Exchanges are available on a monthly basis for each State or Union Territory.<sup>5</sup> Periodically, the data on the number of persons on the Live Register are classified by sex, age, educational level and the occupation appropriate for them. They provide an interesting glimpse, although partial of the dynamics of a segment of the labour market. However, the basic function of the Exchanges is to bring together the job-seekers and the potential employers and there is no bar against registration by persons who already have some work or job. As we shall see below in Sections IV and VI, the use of the data on the number of persons on the Live Register to indicate urban unemployment is subject to several serious reservations.

### *The NSS*

9. The present study will pay considerable attention to the NSS data on the size and characteristics of the labour force. The NSS Rounds were intended to furnish the material to build up a time series based on annual data. Unfortunately, frequent changes in (a) the concepts (particularly the reference period), (b) the timing and (c) the duration of the Rounds, prior to the Fourteenth Round, limit the validity of any such study. Of course, these changes were intended to improve our understanding of the reality and have enriched our understanding of the problems of defining and measuring employment and unemployment.<sup>6</sup> However, it will be seen below that comparisons of the

<sup>3</sup>J. Krishnamurty, "Long Term Changes in the Industrial Distribution of the Working Force in the Indian Union and the States : 1901—1961", Appendix VII.

<sup>4</sup>D.G.E.T., Quarterly Employment Review, Jan.-March, 1969.

<sup>5</sup>At the end of December, 1969, besides the 415 Employment Exchanges, there were also 183 Employment Information and Assistance Bureaux functioning in rural areas of different States and 45 University Employment Information and Guidance Bureaux. However, the statistics from these bureaux are not merged with the figures from Exchanges.

<sup>6</sup>For a review of the major changes in the conceptual framework, see Sudhir Bhattacharyya, "A Note on Employment and Unemployment Concepts Adopted in the NSS", Appendix I.

NSS data over time are vitiated also by frequent changes in the tabulation programme and the categories for classification adopted in different Rounds. Also, because of the considerable time required to process and tabulate the field data, the latest available data relate to the 21st Round undertaken during July, 1966—June 1967.

10. It should be noted that the rural labour force surveys by the NSS were discontinued after 1961-62 (17th Round) on the ground that the information was of no use for policy purposes and was misinterpreted. The subsequent data for rural India from the 19th and the 21st Rounds, are based on the Integrated Household Schedule, canvassed among a rather small number of households. It is reported that in the 24th Round even the urban labour force survey has been abandoned. Instead, some pilot studies have been taken up to evaluate once again the feasibility of alternative approaches to the measurement of employment and unemployment.

11. An important limitation of the NSS data is the non-availability, by and large, of much of the information, by States or regions. The size of the sample tends to be rather small to give reasonably stable estimates of many of the labour force characteristics at the State level. Therefore, our discussion will generally relate only to the national data for rural and urban areas. The sample size also restricts the cross-classifications that may be desired for various characteristics. Despite these limitations, the NSS is a useful source of information on the anatomy of unemployment, which needs to be studied in depth.

12. With this background information on the major sources of data, we can now proceed to discuss the available estimates of the level of labour force participation in India. Other details of the methodology of data collection by different sources will be noted at appropriate places.

## II

### THE LEVEL OF LABOUR FORCE PARTICIPATION

13. Data on the level of labour force participation in the country are available from both the NSS and the last census.<sup>1</sup> The 1961 Census has been the first to provide a classification of the entire population into workers and non-workers by sex and broad age-groups of 0—14, 15—34, 35—59 and 60 and over. The relevant tables are available for each district by rural-urban residence and also for each town. The tables show also the industrial category distribution of the workers of each sex by broad age-groups. (The industrial categories tend to approximate the one-digit industrial classification).

14. The age-groups used for the census classification are rather wide and not detailed enough for projections of the labour force and particularly for distinguishing the number of new entrants into the labour force from the withdrawals. In recognition of this problem, in 1965-66, a co-operative project was under taken by the University of Bombay, the Office of the Registrar General and the Office of the Superintendent of Census Operations in Maharashtra State, to compile, from the 1961 Census records, special tables on the industrial category distribution of the workers by five-year age-groups, sex, rural-urban residence and district (for females, by marital status as well). These tables have proved useful and have recently been used to estimate the participation rates for the country as a whole.<sup>2</sup>

#### *The Estimates Based on the 1961 Census and the NSS (1960-61)*

15. In Table 1 are shown the participation rates for India, estimated on the basis of the special 1961 Census tables for Maharashtra. To permit comparison with the NSS data on labour force participation rates, based on the 16th Round, the rates for ages above 30 are shown in ten-year age-groups.

<sup>1</sup>The data from the earlier census do not permit estimates of age-specific participation rates. See Pravin Visaria, "Estimates of Participation Rates and Labour Force, Including and Excluding Unpaid Family Workers, for India, 1961—1981", Appendix V ; J. Krishnamurty, *op. cit.* Appendix VII.

<sup>2</sup>Pravin Visaria, *op.cit.* Appendix V.

TABLE 1

*The Sex-Age-Specific Labour Force Participation Rates for Rural, Urban and All Areas of India, According to the 16th Round of the NSS and Those Based on the 1961 Census Data for Maharashtra (Per Cent)*

Age-group	India		Rural India		Urban India	
	1961 Census	NSS 1960-61	1961 Census	NSS 1960-61	1961 Census	NSS 1960-61
<b>MALES</b>						
5—9	2.51	2.81	2.91	3.28	0.54	0.52
10—14	29.92	28.88	34.14	32.73	11.11	11.69
15—19	69.43	70.33	77.07	76.30	40.70	47.87
20—24	90.95	91.31	94.41	93.09	79.60	85.44
25—29	96.27	95.90	96.86	95.52	94.03	97.33
30—39	97.72	96.49	97.73	96.05	97.68	98.18
40—49	97.76	95.35	97.92	94.84	96.33	97.47
50—59	95.70	90.74	97.25	90.64	88.39	91.22
60+	57.46	61.97	80.06	63.79	59.25	51.90
All Ages	57.12	55.06	58.22	55.67	52.40	52.30
<b>FEMALES</b>						
5—9	1.69	2.12	1.98	2.40	0.24	0.73
10—14	22.78	20.01	26.71	22.97	5.22	6.79
15—19	40.56	33.52	47.17	37.81	11.43	14.60
20—24	43.07	37.07	49.26	41.03	15.55	19.52
25—29	44.76	41.29	50.76	45.67	17.03	21.10
30—39	45.59	47.56	53.34	52.01	21.19	25.96
40—49	50.11	47.18	54.56	50.90	24.75	27.46
50—59	42.91	38.37	46.94	40.60	20.71	26.13
60+	22.42	16.89	24.35	17.64	11.48	12.63
All Ages	27.96	25.17	31.42	27.72	11.09	13.55

NOTE : The NSS rates for all areas of India have been obtained by weighting the rates for rural and urban areas according to the rural-urban distribution of the population of each sex-age-group, as reported by the 1961 census have been taken from Reports 103 (p. 23); 114 (pp. 22, 24).

SOURCES : (1) The National Sample Survey, Reports 103 (p. 23) ; 114 (pp. 22, 24).

(2) Pravin Visaria, " Estimates of Participation Rates and Labour Force, Including and Excluding Unpaid Family Workers, for India, 1961—1981" Appendix V.

16. It is interesting that for males, the participation rates based on the 1961 Census are not significantly different from those estimated from the NSS. Of course, the census rates are slightly higher than those from the NSS for the age-groups 10—14 and 25—59 ; the contrary is the case for age-groups 5—9, 15—24 and 60. Rather interestingly, the rates for rural males, estimated from the census, are generally above those reported by the NSS (except in the age-group 5—9). For urban males, the situation is reversed and the NSS estimates of participation rates are higher than those based on the census, particularly in the age-groups 15—24.

17. The estimates of participation rates for females show a fair degree of divergence ; and the NSS seems to underestimate the female participation rates in all age-groups except 5—9. The divergence arises in respect of female participation rates in rural areas ; for urban females, the NSS estimates of the level of labour force participation are consistently higher than those based on the census.

18. The NSS rates are subject to sampling error ; and in addition, the reference period in the 16th Round (one week) was shorter than that in the census (a fortnight for regular workers in trade, profession or service, and the current or last working season for workers in seasonal activities such as cultivation, dairying, etc.).<sup>9</sup> The close similarity of the census and the NSS participation rates for males is, therefore, gratifying. One might infer that since males have a generally stable attachment to economic activity alternative approaches to measure the extent of their labour force participation would give more or less similar results. The wide-reference period for the enumeration of seasonal workers, adopted by the 1961 Census, had its effect particularly in the case of females in rural areas (where seasonal activities predominate). The marked difference between the NSS and the census estimates of the participation rates for urban males in the age-group 15—24 might, in part, be due to the fact, that the urban labour force survey during the 16th Round was undertaken during July—December, 1960, while the reference period for most of the urban workers enumerated by the 1961 census was a fortnight during February, 1961.

#### *A Comparison of the Crude Participation Rates in Urban Areas—Different States*

19. A comparison of the NSS and the Census estimates of participation rates for the various States might indicate whether some particular areas contributed to the observed difference in participation rates. Unfortunately, this is not feasible for reasons of sample size, noted earlier. The 17th Round in urban India, however, had a fairly large sample and the resulting data have been tabulated to provide estimates of labour force participation rates by sex, age and State of residence.<sup>10</sup> The crude participation rates, by sex, have been shown in Table 2 along with the corresponding data from the 1961 Census. While the level of labour force participation reported by the 17th Round appears to be generally lower than that indicated by the 1961 Census, the co-efficient of rank correlation between the levels reported by the two sources is 0.70 for males and 0.84 for females. Both these values are significant at the 5 per cent level of statistical significance. A similar comparison is not feasible for rural participation rates but one is inclined to believe that with a suitable increase in the sample size and a pooling of the data gathered for the state and the central samples surveyed during the various Rounds, the NSS might provide a useful view of the pattern of inter-state differences in participation rates.

#### *The Crude Participation Rates for States by Caste/Tribe Status*

20. Such differences need to be known if labour force projections are to be made for States, as indeed is necessary. The available 1961 Census data suggest the existence of differences in even the crude or overall participation rates in different States. In part, these differences seem to be related to the composition of the population in terms of the proportion of the scheduled castes and tribes in the population. Tables 3 and 4 indicate the crude worker rates by sex for the three groups of population in rural and urban India.

<sup>9</sup>In seasonal activities, a person who worked for "at least one hour a day throughout the greater part of the working season" was considered a worker. For a discussion of the difficulties of applying such a definition in actual enumeration, See : Pravin M. Visaria, "Priorities for the 1971 Census", *Economic and Political Weekly*, Vol. II, No. 42, October 21, 1967, p. 1913.

<sup>10</sup>However, except in the two States of Maharashtra and West Bengal, the sample seems to have been rather small for estimates of age-specific participation rates, which show rather erratic variations instead of a smooth trend over age-groups.



TABLE 2  
*Crude Labour Force Participation Rates and the Incidence of Unemployment (in the Labour Force Aged 15 and Over) in Urban India, According to the 1961 Census and the Seventeenth Round of the National Sample Survey*

Area	LABOUR FORCE AS PERCENTAGE OF POPULATION <sup>1</sup>				UNEMPLOYED AS PERCENTAGE OF LABOUR FORCE 15 +				
	1961 Census		NSS—17th Round		1961 Census <sup>2</sup>		NSS—17th Round <sup>3</sup>		
	Male	Female	Male	Female	Male	Female	Male	Female	
INDIA <sup>4</sup>	..	54.11	11.25	50.95	10.85	3.25	1.48	3.02	3.31
North Zone	..	51.51	6.60	..	..	2.00	1.68	..	..
Central Zone	..	52.78	8.43	..	..	1.57	0.31	..	..
East Zone	..	57.33	8.07	..	..	5.08	4.46	..	..
West Zone	..	54.78	12.16	..	..	3.64	1.03	..	..
South Zone	..	53.44	15.90	..	..	3.19	1.18	..	..
Andhra Pradesh	..	53.48	18.81	50.62	15.02	2.13	0.37	3.41	4.92
Assam	..	56.25	9.98	49.28	3.18	1.63	1.09	6.04	26.41
Bihar	..	53.01	10.47	47.26	7.14	2.49	0.71	3.78	6.72
Gujarat	..	49.96	9.28	44.94	9.70	3.24	0.41	1.66	1.85
Jammu & Kashmir	..	51.58	6.25	49.28	2.99	1.82	8.15	1.33	1.67
Kerala	..	48.70	13.69	50.57	14.27	5.69	5.30	6.22	7.77
Madhya Pradesh	..	53.10	14.53	50.29	16.14	1.27	0.21	2.24	2.41
Madras	..	55.19	15.09	52.11	14.43	3.79	1.01	4.66	3.60
Maharashtra	..	56.96	13.61	53.15	11.44	3.80	1.25	2.46	2.44
Mysore	..	52.71	14.98	50.20	14.15	2.26	0.77	2.56	2.68
Orissa	..	58.19	13.16	54.37	10.57	1.73	0.33	2.11	2.74
Punjab	..	52.05	4.76	45.89	4.73	2.22	1.50	2.00	1.05
Rajasthan	..	48.61	10.11	47.91	13.47	1.19	0.61	2.29	1.48
Uttar Pradesh	..	52.62	5.36	50.72	7.20	1.72	0.44	2.26	1.38
West Bengal	..	59.39	5.67	56.76	5.47	6.83	9.93	3.47	3.29
Delhi	..	54.21	4.60	53.45	3.56	2.63	3.22	3.42	7.58
Himachal Pradesh	..	57.22	11.99	N.A.	N.A.	1.41	0.51	N.A.	N.A.
Manipur	..	43.55	40.71	43.70	43.45	5.91	0.70	1.14	0.00
Tripura	..	48.36	5.71	51.36	6.27	3.20	4.60	5.49	20.73
Pondicherry	..	51.31	11.30	N.A.	N.A.	5.21	0.98	N.A.	N.A.

<sup>1</sup>In the 1961 Census, conducted during February 10—28, 1961, the reference period was a fortnight preceding the date of enumeration for those engaged in a regular economic activity such as trade, profession or service; for seasonal activities the reference period was the last or the current working season. In the Seventeenth round of the National Sample Survey, conducted during the September, 1961—July, 1962, the reference period was of one week.

<sup>2</sup>The unemployed aged 15 years and over have been taken into account.

<sup>3</sup>The 17th round of the NSS recorded the status of unemployed only for persons in the age-group 15—59.

<sup>4</sup>The Union territory of Andaman and Nicobar Island is excluded from the table because the NSS frame excluded it. The Laccadive group of islands are entirely rural.

Sources: (1) Census of India, 1961, Vol. 1, *India*, Part II-B (i) and II-B (iii), *General Economic Tables*, Tables B-I and B-IX.

(2) The National Sample Survey, No. 127, *Tables with Notes on Urban Labour Force*, Seventeenth Round, September, 1961—July, 1962, Delhi, 1969.

21. If attention is confined to the major 15 States (i.e. excluding Nagaland), among rural males of all the three groups, the highest crude worker rate is reported for Andhra Pradesh and the lowest for Kerala. The highest rate for all rural females is observed in Madhya Pradesh, that for Scheduled Castes in Andhra Pradesh, for Scheduled Tribes in the Punjab and for the non-scheduled population in Maharashtra. The lowest worker rate for females is observed in West Bengal for Scheduled Castes, the non-scheduled population as well as the aggregate. The female worker rate for the scheduled tribes in West Bengal is only slightly above that in Kerala which reports the lowest rate for them.

22. The number of scheduled caste or tribe persons in the urban areas of many of the States/ Union Territories tends to be rather small.<sup>11</sup> Therefore, the inter-State differences in worker rates for urban areas by caste/tribe status may not be as significant or reliable as those in rural areas. However, it is interesting that for urban males, the highest worker rates for the non-scheduled, the scheduled caste and the total population are observed in Orissa; for the scheduled tribe males, however, the first position goes to Madhya Pradesh. The lowest rates, however, are observed in Gujarat for scheduled caste men, in Assam for scheduled tribes and in Kerala for the non-scheduled and for all men. The rates for urban females are the highest in Andhra Pradesh, for all the groups; the lowest rates are reported in Jammu & Kashmir for the scheduled castes, in Assam for the scheduled tribes, in U.P. for the non-scheduled population, and in West Bengal for all women, which reports the lowest rate for them.

TABLE 3

*Crude Worker Rates (Workers per 1,000 Population), by Sex, for Scheduled Castes, Scheduled Tribes and the Non-Scheduled Population in Different States of Rural India, 1961 Census (Per Cent)*

State/Union Territory	Males				Females			
	All	Sched- uled Castes	Sched- uled Tribes	Non- Sched- uled Popu- lation	All	Sched- uled Castes	Sched- uled Tribes	Non- Sched- uled Popu- lation
India	58.22	59.98	61.43	57.51	31.42	35.86	52.47	28.20
Andhra Pradesh	64.33	67.86	65.98	63.58	46.00	59.13	57.38	42.99
Assam	53.98	55.70	54.21	53.78	32.41	26.88	49.43	28.58
Bihar	55.99	58.22	62.25	54.78	28.49	41.16	56.65	22.44
Gujarat	55.29	53.18	58.44	54.77	34.15	38.07	50.12	30.16
Jammu & Kashmir	59.28	56.42	..	59.55	29.51	25.24	..	29.92
Kerala	47.42	53.05	54.00	46.73	20.88	43.91	40.61	18.22
Madhya Pradesh	61.58	62.87	63.59	60.55	48.60	53.04	58.18	43.86
Madras	62.19	63.52	64.56	61.80	37.11	47.23	49.91	34.27
Maharashtra	58.07	59.08	61.74	57.64	46.74	50.16	56.63	45.56
Mysore	60.40	63.42	60.23	59.89	36.79	45.03	47.27	35.28
Orissa	61.02	61.41	63.75	59.74	27.38	32.18	44.29	18.81
Punjab	53.45	53.79	61.85	53.33	16.50	14.55	69.42	17.00
Rajasthan	60.13	60.33	62.28	59.65	40.82	42.12	51.28	38.39
Uttar Pradesh	59.20	60.45	..	58.84	19.90	28.67	..	17.34
West Bengal	53.47	55.23	58.59	52.30	10.62	10.91	41.86	7.00
Nagaland	61.04	84.62	58.85	88.46	60.33	..	60.97	23.85
Delhi	47.83	50.88	..	46.91	21.98	23.48	..	21.52
Himachal Pradesh	63.48	65.86	65.38	62.20	57.74	58.80	60.95	56.83
Manipur	47.92	59.71	48.60	47.21	44.86	39.17	52.68	40.76
Pondicherry	57.13	62.83	..	55.77	22.96	46.41	..	17.55
Tripura	55.25	59.72	54.98	54.52	22.40	9.22	48.68	8.30
N.E.F.A.	80.99	..	59.86	83.74	17.21	..	31.95	13.40
Andaman & Nicobar	68.28	..	55.49	72.34	22.42	..	51.60	6.30
Laccadive Islands	51.60	..	50.33	82.51	51.68	..	51.62	54.43
Dadra & Nagar Haveli	62.04	47.77	62.71	58.33	57.94	54.39	61.02	28.83

SOURCE : Census of India, 1961, *India*, Part II-A (ii), General Population Tables ; Part V-A (i) Special Tables for Scheduled Castes ; Part V-A (ii) Special Tables for Scheduled Tribes.

<sup>11</sup>See : Census of India, Vol. I, *India*, Part V-A(i), *Special Tables for Scheduled Castes*, p. xlix.

TABLE 4

*Crude Worker Rates (Workers per 1,000 Population), by Sex, for Scheduled Castes, Scheduled Tribes and the non-Scheduled Population in Different States of Urban India, 1961 Census (Per cent)*

State/Union Territory	Males				Females			
	All	Scheduled Castes	Scheduled Tribes	Non-Scheduled Population	All	Scheduled Castes	Scheduled Tribes	Non-Scheduled Population
India ..	52.40	53.24	54.69	48.53	11.09	21.07	31.58	9.87
Andhra Pradesh ..	52.40	55.93	60.22	51.97	18.74	35.33	40.90	16.87
Assam ..	55.36	56.81	47.28	55.84	9.67	15.09	25.27	7.75
Bihar ..	51.73	54.50	50.46	51.50	10.40	24.08	29.14	8.28
Gujarat ..	48.37	45.56	54.66	48.38	9.24	19.24	27.94	8.01
Jammu and Kashmir ..	50.78	54.60	—	50.64	5.78	7.07	..	5.73
Kerala ..	45.98	49.46	48.76	45.79	13.00	32.82	31.82	11.92
Madhya Pradesh ..	52.44	54.03	61.82	52.09	14.50	28.24	40.40	12.42
Madras ..	53.16	54.53	57.45	52.99	14.95	28.43	33.94	13.35
Maharashtra ..	54.84	49.48	56.49	55.05	13.45	22.94	34.71	12.78
Mysore ..	51.57	52.78	56.67	51.43	14.87	25.17	29.37	13.71
Orissa ..	57.21	57.97	59.25	56.93	13.12	29.46	36.08	8.10
Punjab ..	50.92	50.65	—	50.96	4.70	10.89	—	3.86
Rajasthan ..	48.04	50.14	53.11	47.65	10.05	19.81	28.98	8.28
Uttar Pradesh ..	51.74	54.60	—	51.38	5.34	11.90	—	4.49
West Bengal ..	55.38	56.08	54.17	55.32	5.12	10.06	26.27	4.54
Nagaland ..	52.13	70.37	35.54	65.42	9.67	—	14.07	2.38
Delhi ..	52.80	52.03	—	52.89	4.46	9.99	—	3.73
Himachal Pradesh ..	56.43	58.07	54.72	56.08	11.93	21.42	27.08	9.43
Manipur ..	40.99	76.24	35.08	41.32	40.43	17.54	11.80	42.03
Pondicherry ..	48.71	62.79	—	48.07	11.20	37.27	—	10.11
Tripura ..	46.84	57.83	34.70	46.53	5.46	8.47	5.38	5.23
N.E.F.A. ..	—	—	—	—	—	—	—	—
Andaman and Nicobar	66.17	—	—	66.17	5.07	—	—	5.07
Laccadive Islands ..	—	—	—	—	—	—	—	—
Dadra and Nagar Haveli	—	—	—	—	—	—	—	—

SOURCE : Census of India, 1961, *India*, Part II-A (ii), General Population Tables ; Part V-A(i) Special Tables for Scheduled Castes ; Part V-A(ii) Special Tables for Scheduled Tribes.

23. In the country as a whole, the level of work participation by females seems to be the highest among the scheduled tribes, significantly less among the scheduled castes, and still lower in the non-scheduled population. The corresponding differences among males are much smaller. Of course, the pattern is by no means uniform in all the States or Union Territories.

24. The factors responsible for the observed difference in the inter-State and the caste/tribe differences in worker rates are unlikely to be entirely economic. The demand for labour in rural India is influenced by several factors, including the pattern of land use, the frequency of cropping, the seasonal fluctuations in the labour requirements, etc.; in addition the extent (and pattern) of supply of labour probably depends on the extent of owner-cultivation, the assets/income position of the particular groups of population, the extent and duration of school enrolment, the extent and pattern of out-migration and the flow of remittances, and the sex-age composition of the resident population. The available information is insufficient to indicate the extent to which each of these factors is influential but it seems that the participation rates for States conceal rather large inter-district variations which deserve careful study and analysis. Also, microstudies are required to evaluate the validity of the levels of labour force participation, particularly for females, reported in a large undertaking such as the decennial.<sup>12</sup>

25. Such studies would be helpful also for projecting the labour force where one needs to consider the possible changes in the level of participation rates. In the present state of the Indian economy, it is extremely difficult to infer the likely changes in the female participation rates.

#### *The Participation Rates Reported by Different Rounds of the NSS*

26. In this connection, it would be useful to examine the crude or overall participation rates, by sex, reported by the NSS for rural and urban India and summarised in Tables 5. Tables 6 and 7 show separately the proportion of those classified as gainfully employed and unemployed.

27. In examining the data in these tables it should be borne in mind that the reference period has been stabilised at "one week" only after the 13th Round. Also, the 13th as well as the 10th and earlier Rounds did not cover a full-year. As a result, while the 14th and the subsequent Rounds present an average picture for a year, the estimates from earlier Rounds are likely to be affected by the prevailing seasonal situation, particularly in rural India. Yet, some broad features of the three tables are noteworthy.

#### *(1) Urban India*

28. Interestingly, the highest male participation rate was recorded in the 6th Round with a reference period of one month during May—August, 1953. The female participation rate during the same Round was only slightly below that recorded during the 4th Round when the gainful occupation concept was used. The timing of the 6th Round included June and July when the rural participation rates reach their peak level during the year. However, since one does not expect much seasonality in urban labour force participation, it is difficult to interpret the 6th Round data.

29. If attention is restricted to the Rounds beginning with the 9th, when the proper labour force surveys were initiated, one gathers an impression of some decline in the participation rates among both males and females. While, the estimates are subject to sampling error, the participation rates for urban females show a high degree of stability. However, Table 6 suggests that the decline in urban participation rates has been due mainly to lower estimates of the level of unemployment after the 15th Round.<sup>13</sup>

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<sup>12</sup>An important first step in this direction would be to study the time trends in the participation rates at the district level. The Census Paper No. 1 of 1967, published last year, contains a series for the States and the cities. The district data used to prepare the tables for the States might also be useful to the interested scholars.

<sup>13</sup>One must note, however, that the urban frame of the NSS was revised after the 18th Round to conform to the 1961 Census list of towns. The towns that were excluded probably had a significant degree of agricultural activities and, therefore, relatively higher levels of labour force participation.

TABLE 5

*Persons in the Labour Force as Per Cent of the Total Population, by Sex, in URBAN and RURAL Areas of India, According to the Various Rounds of the National Sample Survey*

Round	Duration	Reference Period	Urban India			Rural India		
			Males	Females	Persons	Males	Females	Persons
4th	April—September, 1952	Gainful Occupation Concept	52.42	15.28	34.52	59.39	33.83	46.79
6th	May—August, 1953	One Month	57.00	15.19	37.15	59.03	33.05	46.22
7th	October, 1953—March, 1954	One Month	53.96	14.86	35.33	59.08	31.54	45.48
9th	May—Nov., 1955	Usual Status/One year	54.48	11.94	34.26	59.69	26.62	43.50
10th	December, 1955—May, 1956	One day	55.03	12.09	34.66	58.20	21.72	40.19
11th & 12th	August, 1956—August, 1957	One day	52.59	12.83	33.75	55.07	23.33	39.38
11th & 12th	August, 1956—August, 1957	One day*	56.46*	34.52*	45.22*	55.28*	31.25*	43.28*
11th & 12th	August, 1956—August, 1957	One day†	52.47†	12.04†	33.37†	55.02†	21.11†	38.30†
11th & 12th	August, 1956—August, 1957	One week†	N.A.	N.A.	33.16†	N.A.	N.A.	38.77†
13th	September, 1957—March, 1958	One day	52.61	12.96	33.87	—	—	—
13th	September, 1957—March, 1958	One week	52.78	13.23	34.09	—	—	—
14th	July, 1958—June, 1959	One week	52.03	11.73	32.95	56.88	26.66	41.85
15th	July, 1959—June, 1960	One week	52.30	12.39	33.36	58.74	23.58	41.45
16th	July, 1960—June, 1961	One week	52.30	13.55	34.01	55.67	27.72	41.88
17th	September, 1961—July, 1962	One week	50.95	10.85	32.14	52.20	22.16	37.50
18th	February, 1963—January, 1964	One week	50.28	10.45	31.68	N.A.	N.A.	N.A.
19th	July, 1964—June, 1965	One week	50.17	10.35	31.57	N.A.	N.A.	N.A.
19th†	July, 1964—June, 1965	One week	51.28	13.40	33.58	53.01	26.76	40.15
20th	July 1955—June, 1966	One week	49.02	10.35	31.01	N.A.	N.A.	N.A.
21st†	July 1966—June, 1967	One week	50.56	10.85	31.93	53.96†	28.53†	41.41†

\* Figures relate to the agricultural labour households only.

† Figures relate to the households other than those classified as agricultural labour households.

‡ Data are based on the Integrated Household Schedule.

NOTE: N.A. refers to the non-availability of the data in the published or draft reports or to the non-publication, so far, of the relevant data. A dash (—) is entered to indicate that the data were probably not collected.

SOURCES: The National Sample Survey Reports : (a) For Urban Data : (b) For Rural Data :

- (a) (1) No. 14, pp. 49, 50.
- (2) No. 62, Ninth Round, p. 187.
- (3) No. 34, Tenth Round, p. 96.
- (4) No. 52, Eleventh and Twelfth Round, pp. 111, 112, 144.
- (5) No. 63, Thirteenth Round, Urban, pp. 50, 76.
- (6) No. 85, Fourteenth Round, Urban, p. 8.
- (7) No. 169 (Draft), Fifteenth Round, p. 22.
- (8) No. 103, Sixteenth Round, Urban, p. 24.
- (9) No. 127, Seventeenth Round, Urban, p. 19.
- (10) No. 164 (Draft), Eighteenth Round, Urban, p. 12.
- (11) No. 181 (Draft), Nineteenth Round, Urban, p. 19.
- (12) No. 201 (Draft), Nineteenth Round, p. 89.
- (13) No. 189 (Draft), Twentieth Round, Urban, p. 15.
- (14) No. 209 (Draft), Twenty-first Round, Urban, p. 32.
- (b) (1) No. 14, pp. 49, 50.
- (2) No. 62, Ninth Round, p. 154.
- (3) No. 34, Tenth Round, p. 41.
- (4) No. 52, Eleventh and Twelfth Round, pp. 54, 55, 83.
- (5) No. 100, Fourteenth Round, Rural, p. 37.
- (6) No. 148 (Draft), Fifteenth Round, Rural, p. 28.
- (7) No. 114, Sixteenth Round, Rural, p. 20.
- (8) No. 197 (Draft), Seventeenth Round, Rural, pp. 20, 22.
- (9) No. 201 (Draft), Nineteenth Round, p. 42.
- (10) Twenty-first Round, Preliminary, Cyclostyled Sheets, pp. 4–6.

TABLE 6

*The Gainfully Employed and the Unemployed as Per Cent of the Total Population, by Sex, in URBAN Areas of India, According to the various Rounds of the National Sample Survey*

Round	Duration	Reference Period	Per Cent Gainfully Employed			Per Cent Unemployed		
			Males	Females	Persons	Males	Females	Persons
4th	April—September, 1952	Gainful Occupation Concept	51.93	15.16	34.21	0.49	0.12	0.31
6th	May—August, 1953	One month	53.91	14.96	35.42	3.09	0.23	1.73
7th	October, 1953—March, 1954	One month	51.76	14.54	34.02	2.20	0.32	1.31
9th	May—November, 1955	Usual Status/One year	51.35	11.58	32.44	3.13	0.36	1.82
10th	December, 1955—May, 1956	One day	51.72	11.58	32.68	3.31	0.51	1.98
11th & 12th	August, 1956—August, 1957	One day	48.62	12.00	31.27	3.97	0.83	2.48
11th & 12th	August, 1956—August, 1957	One day*	53.21	30.09	41.36	3.25	4.43	3.86
11th & 12th	August, 1956—August, 1957	One day†	48.48	11.35	30.94	3.99	0.69	2.43
11th & 12th	August, 1956—August, 1957	One week†	—	—	31.33	—	—	1.83
13th	September, 1957—March, 1958	One day	48.99	11.73	31.38	3.62	1.23	2.49
13th	September, 1957—March, 1958	One week	49.98	12.32	32.18	2.80	0.91	1.91
14th	July, 1958—June, 1959	One week	50.17	11.30	31.77	1.86	0.43	1.18
15th	July, 1959—June, 1960	One week	49.70	11.56	31.60	2.60	0.83	1.76
16th	July, 1960—June, 1961	One week	51.01	13.25	33.19	1.29	0.30	0.82
17th	September, 1961—July, 1962	One week	49.41	10.49	31.16	1.54	0.36	0.98
18th	February, 1963—January, 1964	One week	49.32	10.20	31.05	0.96	0.25	0.63
19th	July, 1964—June, 1965	One week	49.22	10.11	30.96	0.95	0.24	0.61
19th‡	July, 1964—June, 1965	One week	49.93	12.42	32.40	1.35	0.98	1.18
20th	July, 1965—June, 1966	One week	48.10	10.09	30.40	0.92	0.26	0.61
21st	July, 1966—June, 1967	One week	49.79	10.65	31.42	0.77	0.20	0.51

\*Figures relate to the agricultural labour households only.

†Figures relate to the households other than those classified as agricultural labour households.

‡Data are based on the Integrated Household Schedule.

SOURCES : The National Sample Survey Reports :—

- (1) No. 14, pp. 49, 50.
- (2) No. 62, Ninth Round, p. 187.
- (3) No. 34, Tenth Round, p. 96.
- (4) No. 52, Eleventh and Twelfth Round, pp. 111, 112, 144.
- (5) No. 63, Thirteenth Round, Urban, pp. 50, 76.
- (6) No. 85, Fourteenth Round, Urban, p. 8.
- (7) No. 169 (Draft), Fifteenth Round, p. 22.
- (8) No. 103, Sixteenth Round, Urban, p. 24.
- (9) No. 127, Seventeenth Round, Urban, p. 19.
- (10) No. 164 (Draft), Eighteenth Round, Urban, p. 12.
- (11) No. 181 (Draft), Nineteenth Round, Urban, p. 19.
- (12) No. 201 (Draft), Nineteenth Round, p. 89.
- (13) No. 189 (Draft), Twentieth Round, Urban, p. 15.
- (14) No. 209 (Draft), Twenty-first Round, Urban, p. 32.

TABLE 7

*The Gainfully Employed and the Unemployed as Per Cent of the Total Population, by Sex, in RURAL Areas of India, According to the various Rounds of the National Sample Survey*

Round	Duration	Reference Period	Per Cent Gainfully Employed			Per Cent Unemployed		
			Males	Females	Persons	Males	Females	Persons
4th	April—September, 1952	Gainful Occupation Concept	59.34	33.79	46.74	0.05	0.04	0.05
6th	May—August, 1953	One month	58.05	33.03	45.72	0.98	0.02	0.50
7th	October, 1953—March, 1954	One month	58.76	31.46	45.27	0.32	0.08	0.21
9th	May—November, 1955	Usual Status/One Year	59.18	26.56	43.21	0.51	0.06	0.29
10th	December, 1955—May, 1956	One day	57.03	21.15	39.32	1.17	0.57	0.87
11th & 12th	August, 1956—August, 1957	One day	52.59	21.12	37.03	2.48	2.21	2.35
11th & 12th	August, 1956—August, 1957	One day*	49.22	24.38	36.82	6.06	6.87	6.46
11th & 12th	August, 1956—August, 1957	One day†	53.52	20.20	37.09	1.50	0.91	1.21
11th & 12th	August, 1956—August, 1957	One week†	—	—	37.98	—	—	0.79
14th	July, 1958—June, 1959	One week	54.81	24.04	39.51	2.07	2.62	2.34
15th	July, 1959—June, 1960	One week	56.89	21.61	39.53	1.85	1.97	1.92
16th	July, 1960—June, 1961	One week	54.23	25.92	40.26	1.44	1.80	1.62
17th	September, 1961—July, 1962	One week	50.25	20.27	35.58	1.95	1.89	1.92
19th‡	July, 1964—June, 1965	One week	51.59	24.66	38.40	1.42	2.10	1.75
21st	July, 1966—June, 1967	One week	52.98	27.29	40.31	0.98	1.24	1.10

\*Figures relate to the agricultural labour households only.

†Figures relate to the households other than those classified as agricultural labour households.

‡Data are based on the Integrated Household Schedule.

SOURCES : The National Sample Survey Reports : -

- (1) No. 14, pp. 49, 50.
- (2) No. 62, Ninth Round, p. 154.
- (3) No. 34, Tenth Round, p. 41.
- (4) No. 52, Eleventh and Twelfth Round, pp. 54, 55, 83.
- (5) No. 100, Fourteenth Round, Rural, p. 37.
- (6) No. 148 (Draft), Fifteenth Round, Rural, p. 28.
- (7) No. 114, Sixteenth Round, Rural, p. 20.
- (8) No. 197 (Draft), Seventeenth Round, Rural, pp. 20—22.
- (9) No. 201 (Draft), Nineteenth Round, p. 42.
- (10) Twenty-first Round, Preliminary, cyclostyled sheets, pp. 4—6.

30. The separate tabulation of the data for agricultural labour households and others for the 11th and 12th Rounds, conducted during 1956-57, suggests that the participation rates for the former exceed those for the non-agricultural labour, households particularly for females.

## (2) Rural India

31. In rural India, the highest male participation rate was reported in the 9th Round when the usual status approach was adopted. The more recent estimates based on a short reference period have been lower but no clear trend is evident. The female participation rate recorded for the 9th Round was lower than that reported by the 4th, 6th and 7th Rounds. Unlike in the case of males, some of the subsequent estimates of female participation rates have been higher.

32. Table 7 suggests that the estimates of the level of unemployment in rural India increased significantly after the specific short reference period of one day or a week was adopted in the 10th Round. (This is not surprising and we shall discuss this issue again in Section IV below). However, the fluctuations in rural participation rates from Round to Round, observed in Table 5, cannot be attributed mainly to the changes in the reported level of unemployment. They are due primarily to fluctuations in the recorded proportions of the gainfully employed.

33. As in urban India, the data from the 11th and 12th Rounds, provide an interesting glimpse of the different level of labour force participation by females in agricultural labour households (31.25 per cent) and others (21.11 per cent). The level of unemployment recorded for the former was also much higher than that for the non-agricultural labour households.

## *The Age Specific Participation Rates from the NSS*

34. The crude participation rates presented in Table 5 are the weighted averages of age-specific participation rates, with weights corresponding to the proportion of population in the relevant age groups. The differences in the crude rates are, therefore, a joint result of differences or changes in age-specific rates and those in the age composition of the sample population. Let us first examine the age-specific participation rates. Tables 8 and 9 show the labour force participation rates by sex and age in urban and rural India as reported by the NSS. Prior to the 16th Round, the rates were estimated for rather non-conventional age-groups. The underlying objective was to mitigate the influence of errors in age reporting on the estimates of characteristics. As a result, the inter-Round comparisons to ascertain time trends are difficult.

35. It appears that in urban India, the participation rates for both males and females in the age-groups 10—24 have been gradually on the decline during the period 1960-61 to 1966-67. In rural India, a similar trend is evident in the case of males in the age-group 10—19 but for females in the same ages the tendency appears to be mild. These changes are plausible and probably reflect the delay in the entry into the labour force, resulting from rising school-enrolment ratios. It is likely that the data from more recent Rounds and the 1971 Census will confirm this hypothesis. Such changes in participation rates for the young are likely to contribute also to a downward change in the over all or crude participation rates, particularly because the post-Independence decline in mortality rates, unaccompanied by a corresponding fall in fertility, is likely to raise somewhat the proportion of population in the younger age-groups.

36. The NSS data do not suggest any decline in the participation rates for higher age-groups. Among urban males aged 50—59, however, some downward tendency perhaps exists. One might expect such a change because of application of retirement rules to the employees in various public sector undertakings, whose importance in the urban labour force has gradually tended to increase.

## *Age-Standardised Participation Rates*

37. As noted earlier, the crude labour force participation rates are affected by the age composition of the population to which they relate. To evaluate the extent of this influence, in Table 10 we have shown also the standardized participation rates, which indicate the crude or overall participation rates that would have been reported if the age-specific rates had been the same as actually recorded but the age composition of the sample population were that of the standard population. The standard age distribution used for this exercise was that reported by the 1961 Census for males and females in India as a whole.



TABLE 8

*The Labour Force Participation Rates in Urban India by Sex and Age, According to the National Sample Survey Data for Specified Rounds*

Age	Males				Females			
	9th Round	10th Round	11th & 12th Rounds	13th Round	9th Round	10th Round	11th & 12th Rounds	13th Round
0—6	0.13	0.03	0.05	0.05	0.04	0.02	..	0.02
7—15	11.06	13.42	10.87	11.08	5.01	4.31	13.94	4.16
16—17	48.52	49.22	41.38	44.64	13.22	11.53	11.86	13.78
18—21	75.86	77.50	74.88	72.97	14.15	14.83	17.21	16.54
22—26	94.59	95.73	93.35	92.72	16.38	17.58	18.62	18.55
27—36	97.32	97.89	96.82	97.00	20.90	21.12	23.78	23.81
37—46	96.53	97.00	95.95	95.61	24.28	28.84	26.18	28.82
47—56	90.57	90.97	89.25	89.12	24.36	22.84	24.74	24.23
57—61	69.68	72.06	72.64	72.35	15.25	20.10	20.68	16.21
62+	45.76	44.26	45.30	44.98	6.56	4.80	6.38	8.79
All Ages	54.48	55.05	52.59	52.61	11.94	12.20	12.83	12.96
Sample Size	91,968	34,982	27,870	28,564	77,445	30,435	24,552	25,290

Age	Males		Females	
	14th Round	15th Round	14th Round	15th Round
0—11	1.39	1.11	0.81	0.63
12—14	16.93	7.89	8.18	3.52
15	25.14	20.74	12.49	7.50
16—17	36.58	44.93	13.05	10.89
18—21	68.96	72.13	12.84	18.20
22—26	91.23	93.55	17.10	19.15
27—36	97.90	96.52	20.65	21.76
37—46	97.66	96.53	25.95	26.64
47—61	84.71	86.75	20.63	21.08
62+	45.23	49.43	8.80	11.72
All Ages	52.03	52.30	11.73	12.39
Sample Size	18,168	18,872	16,214	16,935

The various N.S.S. rounds were undertaken during the time specified below :

Round	Survey Period	Reference Period	N.S.S. Report No.	Page
9	May—November, 1955	Usual status/a year	62	189, 191
10	December, 1955—May, 1956	One Day	34	97, 99
11 and 12	August, 1956—August, 1957	One Day	52	114, 116
13	September, 1957—May, 1958	One Day	63	51, 53
14	July, 1958—June, 1959	One Week	85	49, 53
15	July, 1959—June, 1960	One Week	169	24, 26

TABLE 8 (contd)

*The Labour Force Participation Rates in Urban India, by Sex and Age, According to the National Sample Survey Data for Specified Rounds*

Age		Males				Females			
		16th Round	17th Round	18th Round	19th* Round	16th Round	17th Round	18th Round	19th* Round
5—9	..	0.52	0.18	0.42	2.93	0.73	0.11	0.10	2.74
10—14	..	11.69	8.97	8.13	11.35	6.79	4.36	4.05	7.44
15—19	..	47.87	44.21	41.71	43.95	14.60	11.53	10.37	15.23
20—24	..	85.44	83.89	81.08	81.23	19.52	15.87	14.24	18.22
25—29	..	97.33	96.90	95.92	96.33	21.10	19.65	16.82	17.31
30—39	..	98.18	98.62	97.97	98.04	25.96	21.12	20.70	23.59
40—49	..	97.47	97.17	97.30	96.08	27.46	22.36	23.04	28.93
50—59	..	91.22	88.88	88.06	87.63	26.13	21.53	20.64	28.35
60+	..	51.90	52.24	47.87	56.07	12.63	9.30	9.56	11.70
All Ages	..	52.30	50.95	50.27	51.31	13.55	10.85	10.45	13.40
Sample Size	..	40,858	98,811	54,023	12,671	35,493	86,112	46,380	11,049

Age		Males	Females
		21st Round	21st Round
5—9	..	0.38	0.22
10—13	..	6.11	3.56
14	..	16.75	7.59
15—19	..	39.19	11.17
20—24	..	79.07	15.08
25—29	..	96.57	17.61
30—39	..	98.43	21.20
40—49	..	97.39	23.61
50—59	..	89.73	21.01
60+	..	51.91	10.54
All Ages	..	50.56	10.85
Sample Size	..	232,258	203,229

The various N.S.S. rounds were undertaken during the time specified below :

Round	Survey Period	Reference Period	N.S.S. Report No.	Page
16	July, 1960—June, 1961	.. One Week	.. 103	23
17	September, 1961—July, 1962	.. One Week	.. 127	18
18	February, 1963—January, 1964	.. One Week	.. 164 (Draft)	17
19	July, 1964—June, 1965	.. One Week	.. 201 (Draft)	83, 89
21	July, 1966—June, 1967	.. One Week	.. 209 (Draft)	45

\*Integrated Household Schedule.

TABLE 9

*The Labour Force Participation Rates in Rural India, by Sex and Age, According to the National Sample Survey Data for Specified Rounds*

Age	Males			Females		
	9th Round	10th Round	11th and 12th Rounds	9th Round	10th Round	11th and 12th Rounds
0-6	0.10	0.08	0.26	0.07	0.09	0.05
7-15	29.28	28.77	25.79	16.07	12.98	13.93
16-17	80.16	79.95	75.35	35.83	26.46	31.95
18-21	92.90	91.55	87.11	40.76	30.51	33.29
22-26	97.91	97.08	93.00	42.42	32.13	36.30
27-36	98.59	98.02	93.69	45.59	39.71	43.15
37-46	97.29	97.12	93.10	47.57	41.92	43.84
47-56	93.90	93.49	90.22	39.33	32.45	31.76
57-61	83.95	82.12	75.12	21.65	22.92	19.46
62+	58.77	57.55	52.79	12.00	11.36	9.43
All Ages	59.69	58.20	55.07	26.62	21.72	23.33
Sample Size	41,216	24,991	86,520	39,474	24,238	83,821

Age	Males		Females	
	14th Round	15th Round	14th Round	15th Round
5-11	10.75	11.12*	7.14	3.48*
12-14	48.74	48.26	29.47	26.39
15	67.47	64.93	33.37	31.50
16-17	75.93	80.06	33.23	31.40
18-21	89.79	87.95	37.91	32.49
22-26	95.12	95.00	41.48	37.11
27-36	96.54	95.84	47.76	42.15
37-46	95.72	95.32	48.69	43.52
47-61	87.13	87.55	34.30	31.85
62+	53.08	57.02	12.47	10.85
All Ages	56.88	58.74	26.66	23.58
Sample Size	27,152	81,957	26,216	78,510

\*The figures refer to the age-group 0-11.

The various NSS rounds were undertaken during the time specified below :

Round	Survey period	Reference Period	NSS Report No.	Pages
9	May-November, 1955	Usual status in a year	62	156, 158
10	December, 1955-May, 1956	One Day	34	42, 44
11 & 12	August, 1956-August, 1957	One Day	52	57, 59
14	July, 1958-June, 1959	One Week	100	47
15	July, 1959-June, 1960	One Week	148 (Draft)	32

TABLE 9—(contd)

*The Labour Force Participation Rates in Rural India, by Sex and Age, According to the National Sample Survey Data for Specified Rounds*

Age	Males			
	16th Round	17th Round	19th* Round	21st* Round
5-9	3.28	2.02	2.84	2.63
10-14	32.73	20.43	22.23	24.58
15-19	76.30	71.64	70.11	69.00
20-24	93.09	91.15	93.19	92.14
25-29	95.52	95.20	96.66	97.19
30-39	96.05	94.50	96.80	97.51
40-49	94.84	94.20	95.78	97.21
50-59	90.64	90.56	91.51	92.50
60+	63.79	57.14	62.86	66.70
All Ages	55.67	52.20	53.01	53.96
Sample Size	59,315	1,46,619	10,560	20,896

Age	Females			
	16th Round	17th Round	19th* Round	21st* Round
5-9	2.40	1.16	1.99	2.77
10-14	22.97	12.90	18.17	19.89
15-19	37.81	30.39	35.53	36.41
20-24	41.03	35.06	40.16	41.90
25-29	45.67	39.39	47.12	45.39
30-39	52.01	42.37	51.02	53.82
40-49	50.90	39.49	48.49	55.19
50-59	40.60	35.49	40.87	42.22
60+	17.64	12.35	17.07	23.74
All Ages	27.72	22.16	20.76	28.53
Sample Size	57,056	1,39,724	5,034	20,307

\*Data are based on Integrated Household Schedule.

The various N.S.S. rounds were undertaken during the time specified below :

Round	Survey Period	Reference Period	N. S. S. Report No.	Page
16	July, 1960—June, 1961	One Week	114	22, 24
17	September, 1961—July, 1962	One Week	197 (Draft)	20, 21,
19	July, 1964—June, 1965	One Week	201 (Draft)	36
21	July, 1966—June, 1967	One Week	Preliminary cyclo-styled tables	6

38. It is interesting that the standardized rates for rural males are all (except that for the 9th Round) higher than the reported, while those for urban males are all lower than the reported rates. This observation results from the selective migration of young males from rural to urban areas of the country, which lowers the proportion of population in working ages (say, 15—59) in rural areas and raises it in urban areas. The range of inter-Round variations is lower for the standardized participation rates than for the non-standardized ones, although for many of the Rounds the standardized rates for rural males are not significantly different.

39. In the case of female participation rates, standardization seems to be unimportant. The range of inter-Round variations is slightly wider for standardized rates than for the reported crude rates. Apparently, the differences in crude participation rates of females, reported by different Rounds, were the result of variations in age-specific rates. Besides, the fluctuations in the age composition of the sample population surveyed in different Rounds tended to off set the effect of differentials in age-specific participation rates and to constrict the range of crude rates. The differences in the age composition of the sample population in different NSS Rounds have somewhat magnified the impression of changes in participation rates for males. However, that is not the case for female participation rates.

TABLE 10

*The Crude and Standardized Labour Force Participation Rates for Rural and Urban India, by Sex, According to the National Sample Survey Data for Specified Rounds*

(Per cent)				
NSS Round(s)	Males		Females	
	Crude Rate	Standardized Rate	Crude Rate	Standardized Rate
<b>RURAL INDIA</b>				
9	59·69	59·16	26·62	25·88
10	58·20	58·66	21·72	21·43
11 & 12	55·07	55·62	23·33	22·85
14	56·88	57·85	26·66	26·38
15	58·74	59·70	23·58	23·67
16	55·67	57·08	27·72	27·93
17	52·20	54·30	22·16	22·13
19	53·01	55·52	26·76	26·80
21	53·96	56·07	28·53	28·55
<b>URBAN INDIA</b>				
9	54·48	51·24	11·94	11·47
10	55·05	52·12	12·20	11·81
11 & 12	52·59	50·56	12·83	12·31
13	52·61	50·48	12·96	12·61
14	52·03	49·87	11·73	11·54
15	52·30	49·88	12·39	11·92
16	52·30	51·04	13·55	13·75
17	50·95	50·06	10·85	11·14
18	50·27	49·11	10·45	10·31
19	51·31	50·32	13·40	13·33
21	50·56	49·09	10·85	10·75

NOTE : The smoothed age distribution of the population of India, enumerated by the 1961 Census, has been taken as the standard (See : Census of India, 1961, Vol. I, India Part II-C (i), Social and Cultural Tables (pp. 409—11).

40. It is pertinent to note here the results of another exercise. The worker rates reported by the 1961 Census were weighted by the age composition of the population enumerated by the Censuses of 1901, 1911, 1921 and 1931.<sup>14</sup> It was observed that the changes in the age composition would have lowered the crude worker rate for males from a high of 58.83 per cent in 1911 to 57.16 per cent in 1961; the corresponding decline in the female worker rate have been from 29.26 per cent in 1901 (29.20 per cent in 1911) to 27.96 per cent in 1961. Thus, the differences in crude participation rates reported by successive censuses are significantly larger than can be accounted for by the changes in age composition.

### III

#### COMPOSITION OF THE LABOUR FORCE

41. Students of the employment situation in India are interested not only in the level of labour force participation but also in the industrial, the occupational and the status distribution of the labour force. Of course, the level and the composition of the labour force are not altogether independent. As noted in Section II, the female participation rates for 'agricultural labour' households seem to be significantly above those for other segments of the population even in rural India. For similar reasons, changes in participation rates, actual or reported, are likely to be associated with changes in the distribution of workers or the gainfully employed. Yet, the latter subject is of intrinsic interest and is often used as a yardstick to measure the development of an economy. Since the time trends suggested by the census data have been reviewed by J. Krishnamurty,<sup>15</sup> the present discussion will be restricted to a brief discussion of the 1961 Census data on the industrial distribution of the working force and the NSS data.

#### *Industrial Distribution of Workers : 1961 Census*

42. Table 11 shows the industrial distribution of workers in India as reported by the 1961 Census. The industrial distribution of the gainfully employed in rural India, reported by the 16th Round of the NSS undertaken during 1960-61 is also shown for comparison. The 16th Round data for urban India have not been shown because they do not distinguish between male and female workers.

43. The 1961 Census classification of industrial workers is based on their reported "major activity" i.e. the activity to which they devote a major portion of their work-time. The data suggest a sharp contrast between rural and urban India. More than four-fifths of rural workers were active in the primary sector. Almost one-sixth of male workers and nearly one-fourth of female workers in rural areas reported agricultural labour as their major activity. If the information on secondary activity reported by cultivators and workers engaged in household industry is taken into account, the number of persons who worked as agricultural labourers for some time during the working season preceding or current at the time of the 1961 Census was 11.5 million greater than that reported on the basis of primary activity (31.5 million).<sup>16</sup> In urban India, less than one-tenth of male workers but about one-fourth of female workers reported work in the primary sector.

44. Not only is the secondary sector less important in rural India than in urban, a majority of the rural workers engaged in manufacturing activity work in household industries. The concentration of factories in towns and cities accounts for about 23 per cent of urban male workers being engaged in non-household manufacturing. However, even in urban areas, household industries are by no means uncommon. They engaged over 5 per cent of the male workers and 10 per cent of the female workers.

45. The tertiary sector is seen to be a much more important employer of workers in urban areas than in rural India. This observation is partly the result of the absence of specialization in rural areas where cultivators generally sell and transport their own produce. Yet, the concentration of administrative offices, medical and educational institutions and the public utilities in urban centres accounts for the fact that more than 28 per cent of both male and female workers in urban India were reported to be in the services at the time of the 1961 Census.

<sup>14</sup>The age distribution were taken from : Census of India, Paper No. 2 of 1963, 1961 Census : Age Tables, p. 39. For a similar comparison of the 1951 and the 1961 worker rates, see : Pravin Visaria, "Comparability of 1961 and 1951 Census Economic Data : A Comment", *Artha Vijnana*, Vol. 7, No. 3, September, 1965, pp. 265-268.

<sup>15</sup>J. Krishnamurty, op. cit., Appendix VII.

<sup>16</sup>Census of India, 1961, Vol. I, *India*, Part II-B-(iii), *General Economic Tables*, Table B-VII. Note that the data on secondary activity were collected only for cultivators, agricultural labourers and workers engaged in household industry.

TABLE 11

*The Industrial Distribution of Workers of each Sex in Rural, Urban and All Areas of India According to the 1961 Census and the 16th Round (1960-61) of the National Sample Survey in Rural India.*

Industry Group	Rural India				Urban India		All India	
	Males		Females		1961 Census		1961 Census	
	1961 Census	16th Round	1961 Census	16th Round	Males	Females	Males	Females
A. Primary Sector ..	80.92	80.32	86.42	86.25	9.76	25.38	68.56	82.31
Cultivators ..	61.09	80.32	58.87	86.25	5.56	12.09	51.45	55.72
Agricultural Labour ..	15.77		24.82		2.21	10.57	13.41	23.86
Other Agriculture ..	4.06		2.73		1.99	2.72	3.70	2.73
B. Secondary Sector ..	7.68	8.82	7.17	7.29	33.05	32.23	12.09	8.86
Mining and Quarrying ..	0.53	0.65	0.25	0.35	0.79	0.84	0.58	0.29
Manufacturing ..	6.26	6.50	6.66	6.19	22.41	28.89	10.10	8.16
(Household Industry) ..	(4.35)	(N.A.)	(5.95)	(N.A.)	(5.46)	(19.01)	(4.54)	(6.83)
(Non-Household Industry) ..	(1.91)	(N.A.)	(0.71)	(N.A.)	(22.94)	(9.88)	(5.56)	(1.33)
Construction ..	0.89	1.67	0.26	0.75	3.85	2.50	1.41	0.41
C. Tertiary Sector ..	10.30	10.39	5.40	6.02	55.40	38.62	18.13	7.64
Trade and Commerce ..	2.62	3.87	0.98	1.66	18.00	6.82	5.29	1.38
Transport and Communication ..	0.82	1.38	0.03	0.46	9.26	1.21	2.29	0.11
Services ..	6.86	5.14	4.39	3.90	28.14	30.57	10.55	6.15
(Electricity etc.) ..	(0.15)	(0.11)	(0.15)	(0.16)	(0.33)	(1.83)	(0.37)	(0.26)
Activities not Adequately Described ..	1.10	0.47	1.01	0.44	1.79	3.78	1.22	1.19
All Industries ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

NOTE : The industrial distribution of workers, according to the 1961 Census, takes account of the industrial classification of workers engaged in activities other than cultivation (Table B-IV). More specifically workers classified under Industrial Category IV (Household Industry) and working in Industrial Division 0 have been placed in the industry group "Other Agriculture".

SOURCES : (1) Census of India, 1961, Vol. I, India, Part II-B (i), General Economic Tables, Tables B-I and B-IV (c).

(2) The National Sample Survey, Report 114 (p. 9).

46. According to Table 11, the NSS estimate of the proportion of rural workers engaged in the primary sector is very close to that reported by the 1961 Census. The NSS estimate of the proportion of male workers in the secondary distribution is somewhat higher, mainly because of the higher NSS estimate of the proportion of workers in the construction industry. Similarly, compared to the 1961 Census, the NSS gave a higher estimate of the proportion of both male and female workers in trade and commerce and in transport, communication and storage etc. and it understated the proportion of workers in other services.

47. Of course, these differences could arise due to various reasons such as the sampling error of the NSS estimates, the differences in the reference period, etc. But it is also likely that the NSS investigators, being trained interviewers who handle such work each year, are able to collect better information on a subject like industry or occupation. The smaller proportion of workers whose activities were not adequately described in the NSS supports this impression. There, it would be useful to examine the NSS data on the composition of workers. Let us, however, examine first some evidence from the census data pertaining to change in the proportion of agricultural workers during 1951—1961.

#### *Change in the Proportion of Agricultural Workers during 1951—1961.*

48. As is well-known the 1961 Census data are not comparable with those of 1951 particularly for the three Southern States of Andhra Pradesh, Madras and Mysore, where the workers were apparently underenumerated to a considerable extent in 1951.<sup>17</sup> If, however, these three States are excluded from consideration, the work force participation rates for the rest of India appear to be broadly comparable. More interestingly, as shown in Table 11 A, the proportion of male workers engaged in cultivation in the rest of India appears to have declined by about 2·8 per cent during the decade. On the other hand, the proportion of female workers reported to be cultivators or agricultural labourers increased by about 4·8 per cent. It is because of this divergence in the distribution of male and female workers that a comparison of the proportion of total workers engaged in cultivation shows only a negligible decline.<sup>18</sup> Since the completeness of enumeration of female workers and their classification generally tends to be uncertain, the trend in distribution of male workers needs more attention. It appears that while India is certainly far away from the stage where the absolute number of male workers in agriculture would decline, the pace of industrialization during the 1950's was adequate to lower the percentage of male workers engaged in cultivation.<sup>19</sup> As noted below, the NSS Rounds after 1960-61 also suggest some decline in the proportion of gainfully employed rural males engaged in agriculture (including animal husbandry, forestry, fishing and hunting). One expects, therefore, that the 1971 Census would show a continuation of this trend during the 1960s, but some uncertainty remains because of the slowdown of rate of industrial growth after the end of the Third Five-Year Plan. However, when the necessary data become available, it would be very useful to study the industrial distribution of male and female workers separately.

#### *Industrial Distribution of the Gainfully Employed ; NSS Rounds*

49. Tables 12 and 13 present a summary of the available data on the industrial distribution of workers recorded by the NSS in the various Rounds, both in rural and urban India. If the reservations arising from the changes in the reference period and the duration or timing of the Rounds are taken into account, the number of comparable observations drops to 4 in the case of the male and female workers in urban India and to 6 for rural India. This number would decline further if the data based on the Integrated Household Schedule, are treated with some circumspection. It is also possible that the change in the frame for drawing the urban sample after the 18th Round has introduced an element of non-comparability in the data for urban Rounds. Yet a few tentative inferences can be drawn from the tables.

<sup>17</sup>See J.N. Sinha, "Comparability of 1961 and 1951 Census Economic Data", *Artha Vijnana*, Vol. 6, No. 4, December, 1964 ; also the present authors comment and Sinha's rejoinder in *Artha Vijnana*, Vol. 7, Nos. 3 and 4, September and December, 1965, respectively.

<sup>18</sup>See also, P. M. Visaria, "Agricultural Employment in a Developing Economy : A Postscript", in : A.M. Khusro (Ed.), *Readings in Agricultural Development*, Allied Publishers, Bombay, 1968, pp. 544—46.

<sup>19</sup>For an analysis of the trends in industrial distribution of workers in individual states, see J. Kriahnamurty, *op. cit.*, Appendix VII.



TABLE 11 A

*The Change during 1951—61 in the Proportion of Agricultural Workers in India, Excluding Andhra Pradesh, Mysore, Madras and Territories Not Censused in 1951*

(Figures are in millions unless indicated others wise)

			1951	1961	Decennial Percentage Change
Population	..	Males	142.79	176.52	+23.62
		Females	133.45	164.37	+23.17
		Persons	276.24	340.89	+23.40
Workers	..	Males	79.10	99.30	+25.54
		Females	33.53	42.57	+26.96
		Persons	112.63	141.87	+25.96
Agricultural* Workers	..	Males	53.57	65.39	+22.06
		Females	26.00	34.59	+33.04
		Persons	79.57	99.98	+25.65
Work Force Participation Rate (Per cent)		Males	55.40	56.26	+1.53
		Females	25.12	25.90	+3.11
		Persons	40.77	41.62	+2.08
Proportion of Agricultural Workers among All Workers (Per cent)*		Males	67.73	65.85	-2.78
		Females	77.54	81.24	+4.77
		Persons	70.65	70.47	-0.25

\*Agricultural workers\* include cultivators and agricultural labourers.

SOURCE : (1) <sup>Census</sup> Causes of India, Paper No. 1 of 1962, 1961 causes: <sup>Totals</sup> Final Population Tables, Appendix 1, pp. 389-413.

(2) Causes of India, 1961, Vol. I. India, Part II-A (ii), General Population Tables.

### (1) Urban India

50. Table 12 shows a steady decline in the proportion of workers engaged in agricultural activities and in the manufacture of food products and textiles. On the other hand, the proportion of workers in mining, "other" manufacturing, construction and services appears to have increased. The gain by the service is noteworthy.<sup>30</sup> The trend in the proportion of workers in public utilities transport and communications, and trade and commerce seems to be uncertain. The data for male and female workers both show similar trends. The composition of the manufacturing sector seems to be undergoing a gradual change.

### (2) Rural India

51. The available data from some of the NSS Rounds on the industrial distribution of rural workers are less detailed than those for urban workers. However, by and large, there is little indication of any change. The percentage of male workers in agricultural activities has perhaps declined; but only the construction sector appears to have gained in importance. There is some suggestion of an increase in the proportion of male workers engaged in services; but it seems to be accompanied by a fall in the proportion of female workers engaged in the services.

<sup>30</sup>Some reservation on this point arises from the possibility that persons whose "industry" was not recorded or was not adequately described in the earlier Rounds, might be predominantly in service activities.

TABLE 12

*The Percentage Distribution of the Gainfully Employed PERSONS by Industry, According to the Specified Rounds of the National Sample Survey in URBAN India*

PERSONS

Industry Group	Rounds											
	7th	9th	10th	11th and 12th	13th	14th	15th	16th	17th	18th	19th	21st
1. Agriculture, Livestock, Forestry, Fishing and Hunting	25.91	19.44	19.90	14.76	16.74	16.59	15.46	16.57	16.62	15.69	12.85	13.48
2. Mining and Quarrying	0.54	0.44	0.33	0.50	0.33	0.56	0.49	0.68	0.40	0.81	0.97	0.88
3. Total Manufacturing	23.88	29.58	28.65	32.05	30.51	29.52	31.05	30.24	29.35	29.15	30.35	29.88
(a) Manufacturing of Food Products	5.80	5.30	6.07	5.86	5.77	5.88	6.34	N.A.	N.A.	N.A.	5.09	5.06
(b) Manufacturing of Textiles	9.40	13.25	10.88	13.21	11.95	10.98	10.87	N.A.	N.A.	N.A.	9.52	9.53
(c) Other Manufacturing	8.68	11.03	11.70	12.98	12.79	12.66	13.84	N.A.	N.A.	N.A.	15.74	15.29
4. Construction	3.63	3.41	3.30	3.20	3.54	2.92	3.55	3.59	3.46	4.07	4.06	4.01
5. Electricity, Gas, Water and Sanitary Services		0.81	1.05	0.64	0.79	0.87	0.56	0.55	0.70	0.54	0.58	0.94
6. Trade and Commerce	14.01	14.54	14.24	16.29	15.54	14.60	14.99	15.51	15.63	16.88	16.12	16.00
7. Transport and Communications Occupation	6.60	8.20	8.01	8.69	8.21	8.03	7.50	7.53	8.33	7.97	7.82	8.09
8. Services	21.18	21.78	24.41	21.94	22.17	23.97	23.18	22.41	22.04	24.02	26.28	26.12
9. Industries not Recorded or not described	4.25	1.90	2.11	1.93	2.17	2.94	3.42	2.92	3.47	0.87	0.97	0.60
10. Total	100	100	100	100	100	100	100	100	100	100	100	100
11. Number of Sample Persons	2,601	22,566	17,916	15,679	17,263	10,724	11,158	22,609	1,09,011	35,888	7,253	43,669

Notes : The 19th Round data are based on the Integrated Household Schedule.

Sources : The National Sample Survey, Reports No. 14 (p. 67); 62 (p. 93); 34 (p. 124); 52 (p. 44); 63 (p. 83); 85 (pp. 32, 33); 109 (Draft) (pp. 48-50); 103 (p. 21); 127 (p. 77); 164 (Draft) (p. 18); 201 (Draft) (p. 96); 209 (Draft) (pp. 59-60).

TABLE 12 (contd)

## MALES

Industry Group	Rounds							
	7th	9th	10th	13th	14th	15th	19th	21st
1. Agriculture, Livestock, Forestry, Fishing and Hunting ..	22.23	16.35	17.29	13.65	14.41	13.47	9.94	10.84
2. Mining and Quarrying ..	0.58	0.39	0.34	0.36	0.44	0.46	1.05	0.88
3. Total Manufacturing ..	24.69	29.71	29.27	30.49	28.96	30.67	29.85	30.00
(a) Manufacture of Food Products ..	5.50	5.19	5.89	5.52	5.36	5.88	3.67	4.39
(b) Manufacture of Textiles ..	9.22	12.31	10.47	10.80	9.71	9.62	8.52	8.85
(c) Other Manufacturing ..	9.97	12.21	12.91	14.17	13.89	15.17	17.11	16.76
4. Construction ..	3.99	3.77	3.35	3.88	2.99	3.59	4.56	4.23
5. Electricity, Gas, Water and Sanitary Services ..		0.75	0.91	0.81	0.81	0.51	0.62	1.06
6. Trade and Commerce ..	16.61	16.28	15.65	17.42	16.46	17.00	18.08	17.64
7. Transport and Communication Occupation ..	8.15	9.54	9.22	9.77	9.41	8.92	9.23	9.46
8. Services ..	20.19	21.42	21.73	21.56	23.63	22.39	25.73	25.33
9. Industries not Recorded or not adequately described ..	3.56	1.79	2.24	2.06	2.89	2.99	0.94	0.56
10. Total ..	100	100	100	100	100	100	100	100
11. Number of Sample Persons ..	2,111	19,057	15,150	14,375	9,114	9,367	6,079	37,137

NOTE : The 19th Round data are based on the Integrated Household Schedule.

SOURCE : The National Sample Survey, Reports No. 14 (p. 67); 62 (p. 93); 34 (p. 124); 63 (p. 79); 85 (pp. 32, 33); 169 (Draft) (pp. 48-50); 201 (Draft) (p. 96); 209 (Draft) (pp. 55-56).

TABLE 12 (concl)

## FEMALES

Industry Group	Rounds							
	7th	9th	10th	13th	14th	15th	19th	21st
1. Agriculture, Livestock, Forestry, Fishing and Hunting ..	40.15	34.49	32.82	30.69	27.35	24.97	26.68	27.24
2. Mining and Quarrying ..	0.41	0.69	0.27	0.18	1.11	0.62	0.61	0.92
3. Total Manufacturing ..	20.72	28.93	25.62	30.61	32.24	32.84	32.79	29.26
(a) Manufacture of Food Products ..	6.95	5.80	6.93	6.90	8.45	8.50	5.99	8.61
(b) Manufacture of Textiles ..	10.09	17.82	12.89	17.14	17.21	16.83	14.31	13.13
(c) Other Manufacturing ..	3.68	5.31	5.80	6.57	6.58	7.51	9.24	7.52
4. Construction ..	2.23	1.66	3.02	1.99	2.62	2.25	1.65	2.82
5. Electricity, Gas, Water and Sanitary Services ..		1.15	1.78	0.71	1.16	0.81	0.39	0.32
6. Trade and Commerce ..	3.93	6.06	7.25	7.00	5.43	5.34	6.74	7.46
7. Transport and Communication Occupation ..	0.61	1.64	2.02	1.16	1.22	0.75	1.15	0.92
8. Services ..	25.05	23.54	25.77	24.94	25.63	26.98	28.85	30.30
9. Industries not Recorded or not adequately described ..	6.90	1.84	1.45	2.72	3.24	5.44	1.14	0.76
10. Total ..	100	100	100	100	100	100	100	100
11. Number of Sample Persons ..	490	3,509	2,766	2,888	1,610	1,791	1,174	6,532

SOURCE : The National Sample Survey No. 14 (p. 67); 62 (p. 93); 34 (p. 124); 63 (p. 81); 85 (pp. 32, 33); 169 (48—50); 201 (Draft) (p. 96); 209 (Draft) (pp. 57, 58).

NOTE : The 19th Round data are based on the Integrated Household Schedule.

TABLE 13

*The Percentage Distribution of the Gainfully Employed PERSONS by Industry, According to the Specified Rounds of the National Sample Survey in RURAL India*  
PERSONS

Industry Group	Rounds										
	7th	9th	10th	11th and 12th	14th	15th	16th	17th	19th	21st	
1. Agriculture, Livestock, Forestry, Fishing and Hunting ..	83.79	83.99	82.05	78.24	81.05	79.62	82.21	79.56	80.01	80.29	
2. Mining and Quarrying ..	0.30	0.50	0.55	0.65	0.58	0.98	0.56	0.40	0.76	0.65	
3. Total Manufacturing ..	6.88	7.65	8.03	8.77	7.69	7.65	6.40	7.95	7.10	7.39	
(a) Manufacturing of Food Products	1.36	N.A.	N.A.	N.A.	2.35	2.45	N.A.	N.A.	N.A.	N.A.	
(b) Manufacturing of Textiles ..	2.35	N.A.	N.A.	N.A.	1.64	2.00	N.A.	N.A.	N.A.	N.A.	
(c) Other Manufacture ..	3.15	N.A.	N.A.	N.A.	3.70	3.20	N.A.	N.A.	N.A.	N.A.	
4. Construction ..	0.95	0.94	0.82	1.46	1.51	1.85	1.38	1.97	1.74	2.64	
5. Electricity, Gas, Water and Sanitary Services ..		0.16	0.20	0.14	0.11	0.16	0.12	0.24	0.12	0.11	
6. Trade and Commerce ..		2.27	1.92	3.46	2.58	3.17	3.16	2.76	2.78	2.55	
7. Transport and Communications Occupation ..		0.61	0.75	1.31	1.01	0.90	1.10	0.89	0.72	0.93	
8. Services ..		3.83	4.09	5.19	4.58	4.07	4.62	4.94	4.44	4.59	
9. Industries not Recorded or not adequately described ..		1.39	N.A.	0.78	0.89	1.60	0.45	1.29	2.30	0.87	
10. Total ..		100	100	100	100	100	100	100	100	100	
11. Number of Sample Persons ..		18,290	34,139	30,281	22,048	61,200	1,16,371	2,86,343	14,916	16,213	

NOTE : The 19th and the 21st Round data are based on the Integrated Household Schedule.

SOURCE : The National Sample Survey, Reports No. 14 (p. 67); 62 (p. 175); 52 (p. 39); 100 (p. 92); 148 (Draft) (p. 72); 114 (p. 9); 201 (Draft) (p. 13); Preliminary tables on the 21st Round (p. 10).

TABLE 13 (contd)

## MALES

Industry Group	Rounds										
	7th	9th	10th	11th and 12th	14th	15th	16th	17th	19th	21st	
1. Agriculture, Livestock, Forestry, Fishing and Hunting ..	82.94	N.A.	82.18	N.A.	80.29	78.70	80.32	78.39	78.55	77.87	
2. Mining and Quarrying ..	0.38	N.A.	0.60	N.A.	0.73	1.21	0.65	0.41	0.87	0.77	
3. Total Manufacturing ..	6.30	N.A.	7.28	N.A.	7.35	7.44	6.50	7.86	7.16	7.54	
(a) Manufacture of Food Products ..	1.08	N.A.	N.A.	N.A.	1.83	2.06	N.A.	N.A.	N.A.	N.A.	
(b) Manufacture of Textiles ..	1.59	N.A.	N.A.	N.A.	1.18	1.68	N.A.	N.A.	N.A.	N.A.	
(c) Other Manufacturing ..	3.63	N.A.	N.A.	N.A.	4.34	3.70	N.A.	N.A.	N.A.	N.A.	
4. Construction ..	1.10	N.A.	0.94	N.A.	1.80	2.12	1.67	2.24	2.02	2.86	
5. Electricity, Gas, Water and Sanitary Services ..	2.77	N.A.	0.13	N.A.	0.09	0.13	0.11	0.15	0.12	0.15	
6. Trade and Commerce ..	0.88	N.A.	2.69	N.A.	2.96	3.63	3.87	3.15	3.35	3.16	
7. Transport and Communications ..	3.93	N.A.	1.30	N.A.	1.38	1.20	1.38	1.20	0.99	1.37	
8. Services ..	1.70	N.A.	4.08	N.A.	4.62	4.06	5.03	5.36	4.87	5.39	
9. Industries not recorded or not adequately described ..	100	—	100	—	100	100	100	100	100	100	
10. Total ..	12,012	—	14,149	—	15,384	45,695	59,315	1,46,619	10,275	10,889	
11. Number of Sample Persons ..											

NOTE : The 19th and the 21st Round data are based on the Integrated Household Schedule.

SOURCE : The National Sample Survey, Reports No. 14 (p. 67); 34 (p. 76); 52 (p. 39); 100 (p. 92); 148 (p. 72); 114 (p. 9); 197 (Draft) (p. 9); 201 (Draft) (p. 13); Preliminary tables on the 21st Round (p. 10).

TABLE 13 (cont'd)  
FEMALES

Industry Group	Rounds									
	7th	9th	10th	11th and 12th	14th	15th	16th	17th	19th	21st
1. Agriculture, Livestock, Forestry, Fishing and Hunting ..	85.41	N.A.	81.67	N.A.	82.80	82.13	86.25	82.55	83.29	85.06
2. Mining and Quarrying ..	0.15	N.A.	0.40	N.A.	0.23	0.37	0.35	0.35	0.52	0.41
3. Total Manufacturing ..	7.98	N.A.	10.11	N.A.	8.48	8.20	6.19	8.20	6.98	7.08
(a) Manufacture of Food Products ..	1.92	N.A.	N.A.	N.A.	3.53	3.51	N.A.	N.A.	N.A.	N.A.
(b) Manufacture of Textiles ..	3.84	N.A.	N.A.	N.A.	2.70	2.85	N.A.	N.A.	N.A.	N.A.
(c) Other Manufacturing ..	2.22	N.A.	N.A.	N.A.	2.25	1.84	N.A.	N.A.	N.A.	N.A.
4. Construction ..	}		N.A.	N.A.	0.85	1.11	0.75	1.29	1.14	2.19
5. Electricity, Gas, Water and Sanitary Services ..	}		N.A.	N.A.	0.14	0.25	0.16	0.50	0.12	0.04
6. Trade and Commerce ..	1.30	N.A.	1.38	N.A.	1.71	1.94	1.66	1.76	1.54	1.33
7. Transport and Communication ..	0.08	N.A.	0.09	N.A.	0.15	0.07	0.46	0.10	0.12	0.07
8. Services ..	3.64	N.A.	4.45	N.A.	4.51	4.09	3.74	3.84	3.48	3.02
9. Industries not Recorded or not adequately described ..	0.78	N.A.	1.03	N.A.	1.13	1.84	0.44	1.41	2.81	0.80
10. Total ..	100	—	100	—	100	100	100	100	100	100
11. Number of Sample Persons ..	6,278	—	4,838	—	6,664	15,505	57,056	1,39,724	4,641	5,324

Notes: The 19th and the 21st Round data are based on the Integrated Household Schedule.

Sources: The National Sample Survey, Reports No. 14 (p. 67); 34 (p. 76); 100 (p. 92); 148 (Draft) (p. 72); 114 (p. 9); 197 (Draft) (p. 9); 201 (Draft) (p. 13); Preliminary tables on the 21st Round (p. 10).

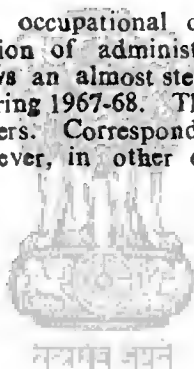
*Occupational Distribution of the Gainfully Employed : NSS Rounds*

52. The recognition of a distinction between industry and occupation has been relatively recent in India. It has gradually become important because of the growth of large industrial firms which try to integrate within their structure several activities such as manufacturing, marketing, transport and welfare and catering services. The industrial classification of workers tends to be according to the activity of the firm and, therefore, workers performing diverse jobs are classified under the same industrial group. An occupational classification of workers tends to be a useful supplement to their industrial classification.

53. In Tables 14 and 15 we have summarized the NSS data on the occupational distribution of the gainfully employed in urban and rural India, according to various Rounds. To mitigate the influence of sampling errors, the data are restricted to one-digit occupational classification. In examining these data, it is necessary to bear in mind the fact that the occupational classification used by the NSS has undergone frequent changes, at least prior to the 14th Round. An attempt has been made to ensure comparability but errors are not unlikely. It seems that the clerical and related workers were described as "ministerial" workers up to the 13th Round. However, in the classification for the 9th and the 10th Rounds, some persons engaged in the "services" seem to have been classified as "subordinate administrative and executive" workers. In the 18th Round in urban India, the proportion of employed male workers, for whom occupations were not recorded, was unusually high. This rise has been mainly at the cost of the percentage of 'clerical and related' workers. Some errors in punching or tabulating the data are probably responsible for this sudden shift.

(1) *Urban India*

54. The interesting changes in the occupational distribution of workers are naturally concentrated in urban India. The proportion of administrative, executive and managerial workers among the gainfully employed males shows an almost steady rise from between 2.8 to 3.00 per cent during 1956-60 to about 4.3 per cent during 1967-68. There are signs also of an increase in the proportion of clerical and related workers. Correspondingly, the proportion of workers in agricultural activities shows a decline. However, in other occupations, no clear trend is evident.





**TABLE 14**  
**The Percentage Distribution of the Gainfully Employed PERSONS by Occupation, According to the Specified Rounds of the National Sample Survey in URBAN India**  
**PERSONS**

Occupation Group	Rounds												
	7th	9th	10th	11th & 12th	13th	14th	15th	16th	17th	18th	19th	20th	21st
Professional, Technical, etc.	14-28	4-84	4-93	5-31	5-32	5-62	5-41	5-36	5-58	5-13	6-02	5-83	6-19
Administrative, Executive, etc.		15-87	16-82	2-33	2-42	2-34	2-59	2-56	3-25	3-07	3-23	3-52	3-90
Clerical & Related ..	N.A.	N.A.	N.A.	7-87	7-42	8-04	7-84	7-88	8-63	3-29	9-79	9-84	9-97
Distributive and Financial Operations ..	12-35	13-32	12-85	15-26	14-30	14-07	14-27	14-74	14-86	15-02	15-53	14-02	14-54
Agriculture, Forestry, etc. ..	26-11	19-70	19-77	14-80	16-78	16-59	16-23	16-30	16-40	15-58	12-03	11-97	13-40
Mining and Quarrying ..	N.A.	N.A.	N.A.	0-44	0-22	0-20	0-44	0-45	0-24	0-45	0-58	0-49	0-50
Transport and Communication ..	N.A.	4-05	N.A.	6-57	6-21	5-30	5-20	4-55	5-15	5-35	5-38	5-89	5-22
Crafts and Production Process Workers ..	25-60	32-86	36-16	31-32	30-85	33-57	34-30*	35-08	33-30	33-81	35-08	35-50	34-03
Services ..	13-31	8-94	6-67	12-39	12-69	12-06	11-73	11-10	9-88	11-15	11-43	11-56	11-69
Unskilled Workers ..	8-14	N.A.	N.A.	2-91	2-90	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Other Occupations and Not Recorded ..	N.A.	0-42	2-80	0-80	0-89	2-21	1-99	1-98	1-71	7-15	0-93	1-38	0-56
Total ..	100	100	100	100	100	100	100	100	100	100	100	100	100
Sample persons ..	2,601	46,023	17,916	15,679	17,263	34,382	11,158	22,609	1,09,015	35,888	47,768	42,885	43,669

\*Includes Loaders and Unloaders.

Sources : The National Sample Survey, Reports No. 14 (p. 158) ; 62 (p. 212) ; 34 (p. 130) ; 52 (p. 47) ; 63 (p. 87) ; 85 (p. 15) ; 160 (Draft) (p. 62) ; 103 (pp. 29, 30) ; 127 (p. 76) ; 164 (Draft) (pp. 20, 21) ; 201 (Draft) (p. 99) ; 189 (Draft) (pp. 34, 35) ; 209 (Draft) (pp. 74, 75)

TABLE 14 (contd)

## MALES

Occupation Group	Rounds											
	7th	9th	10th	11th & 12th	13th	14th	15th	16th	18th	19th	20th	21st
Professional, Technical etc.	{ 16.46	{ 4.93	4.81	5.35	5.43	5.75	5.29	5.31	4.80	5.65	5.43	5.77
Administrative, Executive etc.			18.39	2.78	2.91	2.75	2.99	3.01	3.46	3.59	3.92	4.31
Clerical & Related	..	N.A.	N.A.	9.28	8.82	9.43	9.28	9.47	3.75	11.19	11.26	11.46
Distributive and Financial Operations	14.35	14.85	14.10	16.77	15.90	15.73	16.08	16.55	16.24	16.76	15.07	15.93
Agriculture, Forestry etc.	..	22.25	17.15	11.94	13.66	14.60	14.16	13.01	13.09	9.93	9.69	10.80
Mining & Quarrying	..	N.A.	N.A.	0.50	0.25	0.16	0.38	0.39	0.43	0.56	0.51	0.52
Transport & Communication	..	N.A.	N.A.	7.82	7.41	6.28	6.21	5.56	6.25	6.26	6.88	6.16
Crafts & Production Process Workers	27.24	33.31	37.74	31.09	30.89	32.84	34.13*	35.31	34.03	35.39	35.70	34.38
Services	..	13.19	7.49	5.04	10.82	10.88	10.18	9.67	9.85	9.79	10.22	10.13
Unskilled Workers	..	6.51	N.A.	2.90	3.05	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Other Occupation & Not Recorded	..	N.A.	2.77	0.75	0.80	2.28	1.81	1.88	8.10	0.88	1.32	0.54
Total	..	100	100	100	100	100	100	100	100	100	100	100
Sample Persons	..	2,111	38,855	15,150	13,329	14,375	18,168	9,367	18,783	30,724	41,166	37,137

\*Included Loaders and Unloaders.

Source: The National Sample Survey, Reports No. 14 (p. 158); 62 (p. 212); 34 (p. 130); 52 (p. 45); 63 (p. 87); 85 (p. 15); 169 (Draft) (p. 60); 103 (pp. 29, 30); 127 (p. 76); 164 (Draft) (pp. 20-21); 201 (Draft) (p. 99); 189 (Draft) (pp. 30, 31); 209 (Draft) (pp. 70, 71).

TABLE 14 (concl'd)

## FEMALES

Occupation Group	Rounds											
	7th	9th	10th	11th & 12th	13th	14th	15th	16th	18th	19th	20th	21st
Professional, Technical etc.	5.58	{ 4.36 7.21 }	5.50	5.09	4.82	4.97	5.97	5.63	6.82	7.99	8.06	8.36
Administrative, Executive, etc.			9.06	0.23	0.23	0.33	0.66	0.69	0.69	0.95	1.25	1.33
Clerical & Related	N.A.	N.A.	N.A.	1.21	1.06	1.17	1.01	1.03	0.83	2.00	2.08	2.21
Distributive and Financial Operations	4.28	5.80	6.66	8.17	7.04	5.85	5.69	6.88	8.25	8.77	8.29	7.27
Agriculture, Forestry, etc.	41.62	34.51	32.78	28.27	30.83	26.40	26.04	30.44	29.32	23.68	24.42	27.05
Mining & Quarrying	N.A.	N.A.	N.A.	0.15	0.10	0.41	0.71	0.67	0.62	0.64	0.35	0.40
Transport and Communication	N.A.	0.45	N.A.	0.74	0.80	0.49	0.43	0.28	0.33	0.44	0.49	0.30
Crafts & Production Process Workers	20.06	30.64	28.34	32.38	30.68	37.17	35.14*	33.96	32.62	33.41	34.49	32.25
Services	13.79	16.05	14.71	19.78	20.88	21.32	21.51	18.01	18.40	20.60	18.80	19.85
Unskilled Workers	14.67	N.A.	N.A.	2.96	2.24	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Other Occupation Unidentifiable and Not Recorded	N.A.	0.98	2.95	1.02	1.32	1.89	2.84	2.41	1.86	1.22	1.69	0.60
Total	100	100	100	100	100	100	100	100	100	100	100	100
Sample Persons	490	7,168	2,766	2,350	2,888	16,214	1,791	3,826	5,164	6,602	6,147	6,532

\*Includes Loaders and Unloaders.

SOURCE : The National Sample Survey, Reports No. 14 (p. 158) ; 62 (p. 212) ; 34 (p. 130) ; 52 (p. 46) ; 63 (p. 87) ; 85 (p. 15) ; 169 (Draft) (p. 61) ; 103 (pp. 29, 30) ; 164 (Draft) (pp. 20, 21) ; 201 (Draft) (p. 99) ; 189 (Draft) (pp. 32, 33) ; 209 (Draft) (pp. 72, 73)

TABLE 15

*The Percentage Distribution of the Gainfully Employed PERSONS by Occupation, According to the Specified Rounds of the National Sample Survey in Rural India*

## PERSONS

Occupation Group	Rounds									
	7th	10th	11th & 12th	14th	15th	16th	17th	19th	21st	
1. Professional Technical, etc. }	1.68	{	0.99	1.26	1.12	1.03	2.46	1.22	1.31	1.30
2. Administrative, Executive, etc. }			1.66	1.08	0.64	0.83	0.79	1.01	0.97	1.34
3. Distributive and Financial Operations ..	2.31	2.34	3.48	2.77	3.24	2.99	2.84	2.84	2.59	
4. Farmers, Fishermen, etc. ..	83.51	81.80	77.88	80.98	79.41	81.85	79.41	79.82	80.11	
5. Miners, Quarrymen, etc. ..	N.A.	N.A.	0.63	0.49	0.86	0.56	0.37	0.50	0.52	
6. Transport and Communication Occupatons ..	N.A.	N.A.	1.22	0.89	0.81	0.74	0.80	0.59	0.77	
7. Crafts and Production Process Workers, etc. ..	3.32	10.12	9.79	9.38	9.71	7.92	10.22	9.32	10.31	
8. Service, Sport and Recreation Workers ..	6.92	2.14	3.53	2.93	2.64	2.22	3.11	2.34	2.30	
9. Unskilled Workers ..	2.26	N.A.	0.64	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	
10. Workers n.e.c. & Not Recorded ..	..	0.95	0.49	0.80	1.47	0.47	1.02	2.31	0.74	
11. Total ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	
12. Number of Sample Persons	18,290	18,987	30,281	22,048	61,200	1,16,371	2,86,343	14,916	16,213	

NOTE : In the 19th and the 21st Rounds, the clerical and related workers have been grouped with the Administrative, Executive, etc. In the 16th and the 17th Rounds, the percentage of clerical workers among the gainfully employed was 0.49 and 0.68, respectively, and we have grouped them with the Administrative and Executive, etc. The data for earlier Rounds do not explicitly indicate where the clerical workers are grouped.

The data for the 19th and the 21st Rounds are based on the Integrated Household Schedule.

SOURCES : The National Sample Survey, Reports No. 14 (p. 157) ; 34 (p. 81) ; 52 (p. 40) ; 100 (p. 121) ; 148 (Draft) (p. 76) ; 114 (p. 9) ; 197 (Draft) (p. 10) ; 201 (Draft) (p. 14) ; Preliminary Tables on the 21st Round (p. 12).

TABLE 15 (contd)

## MALES

		Rounds								
Occupation Group		7th	10th	11th & 12th	14th	15th	16th	17th	19th	21st
1. Professional, Technical, etc.	} 2.13	{	1.31	1.50	1.44	1.26	2.68	1.49	1.63	0.44
2. Administrative, Executive, etc.			1.87	1.49	0.89	1.08	1.12	1.34	1.21	0.32
3. Distributive and Financial Operations ..	2.81	2.61	4.01	3.11	3.67	3.69	3.20	3.32	1.40	
4. Farmers, Fishermen, etc. ..	82.87	81.99	76.37	80.26	78.54	79.99	78.34	78.45	84.84	
5. Miners, Quarrymen, etc. ..	N.A.	N.A.	0.68	0.62	1.04	0.66	0.36	0.63	0.27	
6. Transport and Communication Occupations ..	N.A.	N.A.	1.61	1.24	1.09	1.07	1.07	0.80	0.09	
7. Craftsmen and Production Process Workers, etc. ..	2.29	9.75	9.82	9.40	9.80	8.38	10.55	9.81	9.14	
8. Service, Sport and Recreation Workers ..	7.74	1.55	3.30	2.36	2.14	1.95	2.80	2.21	2.54	
9. Unskilled Workers ..	2.16	N.A.	0.70	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	
10. Workers n.e.c. and Not Recorded ..	..	0.92	0.52	0.68	1.38	0.46	0.85	2.03	0.97	
11. Total ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	
12. Number of Sample Persons	12,012	14,149	21,898	15,384	45,695	59,315	1,46,619	10,275	10,889	

NOTE : In the 19th and 21st Rounds, the clerical and related workers have been grouped with the Administrative, Executive, etc. In the 16th and the 17th Rounds, the percentage of clerical workers among the gainfully employed was 0.71 and 0.92, respectively, and we have grouped them with the Administrative and Executive, etc. The data for earlier Rounds do not explicitly indicate where the clerical workers are grouped.

The data for the 19th and 21st Rounds are based on the Integrated Household Schedule.

SOURCE : The National Sample Survey, Reports No. 14 (p. 157) ; 34 (p. 81) ; 52 (p. 40) ; 100 (p. 121) ; 148 (Draft) (p. 76) ; 114 (p. 9) ; 197 (Draft) (p. 10) ; 201 (Draft) (p. 14) ; Preliminary Tables on the 21st Round (p. 12).

TABLE 15 (concl'd)

## FEMALES

Occupation Group	Rounds								
	7th	10th	11th & 12th	14th	15th	16th	17th	19th	21st
1. Professional, Technical etc. } 2. Administrative, Executive, etc. .. }	0.81	0.13	0.62	0.37	0.38	2.00	0.52	0.59	1.75
		1.11	0.01	0.06	0.14	0.09	0.14	0.46	1.86
3. Distributive & Financial Operations ..	1.35	1.56	2.10	1.99	2.08	1.49	1.90	1.79	3.19
4. Farmers, Fishermen, etc. ..	84.75	81.32	81.84	82.64	81.79	85.89	82.20	82.87	77.73
5. Miners, Quarrymen, etc. ..	N.A.	N.A.	0.50	0.20	0.38	0.35	0.38	0.21	0.65
6. Transport and Communication Occupations ..	N.A.	N.A.	0.19	0.09	0.04	0.03	0.10	0.11	1.12
7. Craftsmen and Production Process Workers, etc. ..	5.30	11.11	9.71	9.34	9.47	6.90	9.36	8.24	10.91
8. Service, Sport and Recreation Workers ..	5.33	3.76	4.12	4.24	4.01	2.78	3.92	2.82	2.19
9. Unskilled Workers ..	2.46	N.A.	0.49	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
10. Workers n. e. c. & Not Recorded ..	..	1.01	0.42	1.07	1.71	0.47	1.48	2.91	0.63
11. Total ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
12. Number of Sample Persons ..	6,278	4,838	8,383	6,664	15,505	57,056	1,39,724	4,641	5,324

NOTE : In the 19th and 21st Rounds, the clerical and related workers have been grouped with the Administrative, Executive, etc. In the 16th and 17th Rounds, the percentage of clerical workers among the gainfully employed was 0.04 and 0.03, respectively, and we have grouped them with the Administrative and Executive, etc. The data for earlier Rounds do not explicitly indicate where the clerical workers are grouped.

The data for the 19th and the 21st Rounds are based on the Integrated Household Schedule.

SOURCES: The National Sample Survey, Reports No. 14 (p. 157) ; 34 (p. 81) ; 52 (p. 40) ; 100 (p. 121) ; 148 (Draft) (p. 76) ; 114 (p. 9) ; 197 (Draft) (p. 10) ; 201 (Draft) (p. 14) ; Preliminary Tables on the 21st Round (p.12).

55. The occupational distribution of urban female workers shows a remarkable increase in the proportion of white-collar categories of professional technical, administrative executive and managerial jobs. Presumably, this reflects the growth of employment opportunities for females in the public sector and in the organised private sector during the last two decades. The increasing number of educated females working as teachers has also contributed to this tendency.

(2) *Rural India*

56. The data for rural India, shown in Table 15, give little evidence of any change in the occupational distribution of the working force. While the estimates based on the 21st Round are preliminary and perhaps a little erratic, there is an indication of a decline in the proportion of male workers engaged in transport and communication occupations. Presumably, this is due to some displacement of the traditional mode of transport—the bullock-cart—by the motor trucks operated by essentially urban firms.

*Distribution of the labour force according to status*

57. While the industrial and occupational distributions of the labour force have normally received a fair degree of attention, the distribution of workers according to status or 'class of worker' is often ignored. In fact, however, it is an important variable relevant to the measurement and study of the size of the labour force as well as the level of unemployment. In particular, it is necessary to distinguish the unpaid family workers from others because differentials in the completeness of their enumeration often cause variations in the estimates of participation rates.<sup>21</sup> Also, the unpaid family workers tend to be predominantly females and young children and because of their dual roles (as housewives or students besides the role of occasional workers) they are not always available for work outside their family enterprises.<sup>22</sup> The same is probably true of the self-employed, although, perhaps, to a lesser extent, because prima facie, a self-employed person might be able to change his vocation and status more easily than a family worker who has other obligations.

58. The relative importance of the unpaid family workers and the self-employed in the Indian economy and in a few other developed and underdeveloped countries is shown in Table 16 below. While the developed countries of the West have a very small proportion of either male or female workers in the category of the self-employed (own-account workers) or the unpaid family workers, in countries like India, U.A.R., Thailand and Turkey, these categories are more important. The very high proportion of unpaid family workers among the economically active females in Thailand and Turkey is attributed to the definitions adopted for the enumeration of the labour force.<sup>23</sup> More important is the persistence of unpaid family workers in Japan despite her well-developed economy. The estimated proportion of unpaid family workers among male and female workers in India in 1961 was not much different from the corresponding proportions reported for Japan by her 1960 and the 1955 Censuses, respectively.

59. The unpaid family workers are certainly more numerous in rural India than in urban India. The percentage of unpaid family workers in the labour force for different sex age-groups, estimated from the available NSS data, is shown in Table 17.<sup>24</sup> It is not surprising that among those who enter the labour force before attaining age 15, more than half of females and about one-third of males even in urban areas perform unpaid family work. The high proportion of unpaid family workers among rural female workers of all ages is because of the predominance of family farms in agriculture. The unpaid family workers in urban areas are also likely to be employed in the primary sector or the household industries, whose importance as employers of female workers is evident in Table 11 based on the 1961 Census.

<sup>21</sup>United Nations, *Demographic Aspects of Manpower, Report 1, Sex and Age Patterns of Participation in Economic Activities*, New York, 1962, pp. 6—10.

<sup>22</sup>See Pravin Visaria, "Farmers' Preference for Work on the Family Farm", Appendix VI.

<sup>23</sup>According to one view, in Thailand, all housewives probably tend to be classified as economically active. See: You Poh Seng, "Growth and Structure of the Labour Force in the Countries of Asia and the Far East", in: United Nations, *ECAFE, Report of the Asian Population Conference and Selected Papers*, New York, 1964, p. 197

<sup>24</sup>For details of estimation, see Pravin Visaria: "Estimates of Participation Rates and Labour Force ..." op. cit., Appendix V.

TABLE 16

*The Percentage Distribution of the Economically Active MALES, by Status in Specified Countries*

Country	Census/Survey Dates	Total	Employers	Own Account Workers	Employees	Unpaid Family Workers	Not Classifiable elsewhere
India*	.. March 1, 1961	100.00	7.79	42.45	35.25	14.51	..
Rural India	.. 1961-62	100.00	9.00	43.66	31.50	15.84	..
Urban India	.. 1959-60	100.00	2.03	36.68	53.10	8.19	..
Iran	.. November 1—15, 1956	100.00	1.19	41.97	42.98	8.96	4.90
Japan	.. October 1, 1955	100.00	3.85	27.36	52.32	14.28	2.19
Japan	.. October 1, 1960	100.00	3.71	23.80	61.08	10.61	0.80
Thailand	.. April 25, 1960	100.00	0.51	46.77	16.77	35.17	0.78†
Turkey	.. October 23, 1955	100.00	0.55	43.81	20.50	26.95	8.19
Turkey	.. October 23, 1960	100.00	1.95	43.10	28.29	20.28	6.38
U.A.R. (Egypt)	.. September 20, 1960	100.00	7.82	23.66	48.82	17.65	2.05
Yugoslavia	.. March 31, 1961	100.00†	0.47	32.70	49.42	16.91	0.37
Ghana	.. March 20, 1960	100.00	..	54.68	..	29.63	9.18
Morocco	.. June 18, 1960	100.00	6.96	35.51	33.54	12.91	11.08
Mexico	.. June 6, 1960	100.00	0.82	36.76	60.69	1.07	0.66
Canada	.. June 1, 1961	100.00	..	17.90	..	79.95	1.64
France	.. March 3, 1962	100.00	5.30	16.59	7.51	3.43	4.17
Germany (West)	.. June 6, 1961	100.00	..	14.86	..	82.18	2.79‡
Netherlands	.. May 31, 1960	100.00	9.80	8.51	78.48	3.21	..
Norway	.. October 1, 1960	100.00	9.02	13.77	77.21	..	..
Sweden	.. November 1, 1960	100.00	3.59	14.14	79.81	2.46	..
U.S.A.	.. April 1, 1960	100.00	..	14.40	..	80.32	0.44
							4.84

\*The figures for India for 1961 are estimated on the assumption that the status distribution of the gainfully employed reported by the NSS for its 15th Round (1959-60) in urban India and the 17th Round (1961-62) in rural India was valid also for the workers enumerated by the 1961 Census. The 1961 Census tables do not report the status classification of cultivators.

†Includes persons seeking work for first time (38,184 males).

‡The percentage figures in the status categories do not add up to 100.00 because the total economically active include 'members of producers' co-operatives'.

§Includes unpaid family workers who worked less than 15 hours during the survey week.

||Consists of unemployed persons for whom status classification is not available and of which 76,338 males were seeking work for first time.

Sources : (i) United Nations, Demographic Year Book, 1964, New York, 1965, pp. 336—377.

(ii) India, National Sample Survey, Report No. 169 (Draft), Tables with Notes on Employment and Unemployment, Fifteenth Round, Urban, p. 22, No. 197 (Draft), Tables with Notes on Employment and Unemployment, Seventeenth Round, Rural, pp. 20—22.



TABLE 16 (concl'd)  
*The Percentage Distribution of the Economically Active FEMALES by  
 Status, in Specified Countries*

Country	Census/Survey Dates		Total	Employers	Own Account Workers	Employees	Unpaid Family Workers	Not Classifiable elsewhere
1	2		3	4	5	6	7	8
India *	March 1, 1961	..	100.00	2.88	19.88	30.81	46.43	..
Rural India	1961-62	..	100.00	3.06	19.14	29.90	47.90	..
Urban India	1959-60	..	100.00	0.43	30.19	43.34	26.04	..
Iran	November—1, 15, 1956		100.00	0.63	22.74	58.39	17.75	0.49
Japan	October 1, 1955	..	100.00	0.98	10.23	32.69	54.69	1.41
Japan	October 1, 1960	..	100.00	1.11	12.32	41.36	44.58	0.63
Thailand	April 25, 1960	..	100.00	0.11	11.10	6.49	81.74	0.56†
Turkey	October 23, 1955	..	100.00	0.02	4.70	3.82	91.18	0.28
Turkey	October 23, 1960	..	100.00	0.11	6.91	4.91	87.99	0.08
U.A.R. (Egypt)	September 20, 1960	..	100.00	1.90	8.29	54.92	28.50	6.39
Yugoslavia	March 31, 1961	..	100.00†	0.18	15.48	32.03	51.69	0.50
Ghana	March 20, 1960	..	100.00	..	72.52	..	18.10	5.21
Morocco	June 18, 1960	..	100.00	2.01	20.56	44.83	29.02	3.58
Mexico	June 6, 1960	..	100.00	0.56	18.47	79.56	0.58	0.83
Canada	June 1, 1961	..	100.00	..	5.28	..	89.04	0.80
France	March 3, 1962	..	100.00	1.78	10.50	68.98	18.74	..
Germany (West)	June 6, 1961	..	100.00	..	7.33	..	70.45	22.01§
Netherlands	May 31, 1960	..	100.00	1.81	3.62	84.46	10.11	..
Norway	October 1, 1960	..	100.00	3.72	4.32	91.96	..	..
Sweden	November 1, 1960	..	100.00	1.33	3.49	91.48	3.70	..
U.S.A.	April 1, 1960	..	100.00	..	4.76	..	87.76	2.08
								5.40

\*The figures for India for 1961 are estimated on the assumption that the status distribution of the gainfully employed reported by the NSS for is 15th Round (1959-60) in urban India and the 17th Round (1961-62) in rural India was valid also for the workers enumerated by the 1961 Census. The 1961 Census tables do not report the status classification of cultivators.

†Includes persons seeking work for first time (26,696 females)

‡The percentage figures in the status categories do not add up to 100.00 because the total economically active include 'members of producers' co-operatives.

§Includes unpaid family workers who worked less than 15 hours during week.

Consists of unemployed persons for whom status classification is not available and of which 77,658 females were seeking work for first time.

SOURCES : (i) United Nations, Demographic Year Book, 1964, New York, 1965, pp. 336—377.

(ii) India, National Sample Survey, Report No. 169 (Draft), Tables with Notes on Employment and Unemployment, Fifteenth Round, Urban, p. 22, No. 197 (Draft), Tables with Notes on Employment and Unemployment, Seventeenth Round, Rural, pp. 20—22.

60. With economic development, the proportion of labour force working as employees normally tends to increase. To examine the extent and direction of change in this respect, we have summarized the relevant NSS data in Table 18. Compared to the NSS Rounds during 1955-60, the recent Rounds during 1963-67 show a noteworthy increase in the proportion of wage labourers among urban workers. The data for the rural labour force do not permit any firm inference. However, as the pressure of population on the land increases, the ranks of the rural proletariat may be expected to swell.

61. The 1961 Census data for rural Maharashtra shown in Annexure II suggest that the proportion of agricultural labourers among male workers tends to be steadily higher in the younger age-groups than in the older age groups.<sup>26</sup> The all India data by broad age-groups from the 1961 Census, are consistent with this observation. A preliminary analysis of the NSS data for rural India also suggests a decline in the proportion of employees in the labour force with advancing age, after age 25. While this may be due to a delay in the process of absorption in self-employment on the family farms, it might also reflect the growing pressure of population on land. It was noted earlier in section I that according to the NSS data from the 11th & 12th Rounds undertaken during 1955-56, the problem of unemployment seemed to be more acute for agricultural labour households. The situation might be aggravated further as a result of the growth of population and the rather limited scope for extending the area of land under cultivation.

TABLE 17

*The Percentage of Unpaid Family Workers in the Labour Force in Rural and Urban India, by Sex and Age (Estimated from the N.S.S.)*

Age	Rural India*		Urban India†	
	Males	Females	Males	Females
10-14	47.5	55.5	34.5	52.5
15-19	36.0	49.7	22.0	41.5
20-24	26.0	45.5	13.5	31.7
25-29	17.0	42.5	8.4	26.1
30-34	10.7	40.3	4.3	22.1
35-39	6.3	38.6	2.5	18.8
40-44	3.7	37.0	1.6	16.4
45-49	2.5	35.6	1.1	15.4
50-54	2.2	34.5	1.2	15.0
55-59	2.4	33.6	1.5	15.1
60-64	2.7	33.0	2.1	15.3
65-69	3.3	32.6	3.5	15.5
70-74	4.2	32.4	5.5	16.0
75+	5.6	32.2	8.8	18.0

\*Based on the N.S.S. data from the 16th and the 17th rounds (1960-61 and 1961-62, respectively).

†Based on the N.S.S. data from the 14th and the 15th rounds (1958-59 and 1959-60, respectively).

<sup>26</sup>Pravin Visaria, *The Working Force of Maharashtra State in India, 1961*, cyclostyled, p. 76.

TABLE 18

*Wage Labourers as Per Cent of the Labour Force in Rural and Urban India,  
According to the Specified Rounds of the National Sample Survey*

NSS Round	Rural India			Urban India		
	Male	Female	Persons	Male	Female	Persons
9	27.37	33.66	29.24	50.97	47.74	50.44
10	23.52	24.91	23.89	49.92	40.12	48.27
11 & 12	27.06	26.53	26.89	49.71	39.36	47.85
13	—	—	—	51.19	40.59	49.28
14	26.89	24.81	26.23	53.80	42.71	51.93
15	27.27	24.83	26.59	50.46	40.44	48.68
16	29.82	27.49	29.06	N.A.	N.A.	51.73
17	30.33	27.35	29.47	N.A.	N.A.	51.90
18	N.A.	N.A.	N.A.	N.A.	N.A.	46.51
19	—	—	—	59.05	46.97	57.21
19†	26.54*	26.12*	26.40*	47.00*	36.72*	45.23*
20	N.A.	N.A.	N.A.	59.37	45.74	57.26
21	27.97*	27.97*	30.55*	58.49	47.03	56.67

\*Integrated Household Schedule data.

†The base for these figures relates to only the gainfully employed persons and not the labour force.

#### IV

### THE CONCEPTUAL BACKGROUND OF THE ESTIMATES OF UNEMPLOYMENT

62. Statistics on the volume of unemployment in India are obtained from the three sources : the 1961 Census, the NSS and the Employment Exchanges. Because of the differences in the concepts, definitions and procedures; the alternative estimates are not comparable. However, an examination of the characteristics of persons classified as unemployed is useful for understanding the nature or anatomy of unemployment in India. As a prelude to a detailed discussion of these data, it is necessary to outline the procedures through which different agencies obtain their statistics, and their conceptual framework.

#### *The 1961 Census*

63. The 1961 Census attempted to classify the population first into workers and non-workers. The workers were asked about their industry, occupation, status, etc. and the non-workers were asked about their activity. Eight categories were provided to record the activity of non-workers. Two of these were : (a) "a person who has not been employed before but is seeking employment for the first time" and (b) "a person employed before but now out of employment and seeking employment". The number of persons who were recorded to be in these two categories together formed the unemployed enumerated by the 1961 Census.

64. As noted earlier, the census had adopted a very wide reference period of a working season, with a rather lenient criterion of the quantum of work, for the enumeration of seasonal workers.

Moreover, the term "seeking work" was not defined. Unlike in labour force surveys, the non-workers were not asked a specific question whether they were "seeking work" or were available for it. Since the census enumeration is done by essentially honorary part-time workers, it is hardly possible to train them intensively for measuring the complex phenomenon of unemployment, particularly in rural India. Under the circumstances, it is not unlikely that the number of unemployed enumerated by the 1961 Census—1.41 million (1.29 million males and 0.12 million females) of whom 0.60 million (0.54 million males and 0.06 million females) were in rural areas—was an under estimate. However it is also true that in rural India few persons remain unemployed during the main agricultural season. One cannot, therefore, reject the 1961 census count of the unemployed as absurdly low. Moreover, the census has tabulated the data on the unemployed enumerated in each district, by (i) sex, broad age-groups, rural-urban residence and (ii) by educational attainment. The statistics are, therefore, available with a regional disaggregation or coverage not possible for the NSS or the Employment Exchanges.

### *The NSS Estimates of the Level of Unemployment*

65. Unlike the Census, the NSS conducts an intensive inquiry into the economic activity status of the sample respondents, through experienced full-time investigators. After its tenth Round undertaken during 1955-56, the NSS has normally followed a labour force approach with a short specific reference period of one day and/or one week. Under this approach, persons having some gainful work, however nominal, on the reference day (11th, 12th and 13th Rounds) or on at least one day during the reference week (14th and subsequent Rounds) have been classified as employed. Persons without gainful work throughout the reference period and seeking work or not seeking but available for work during the reference day (11th, 12th and 13th Rounds) or on any one of the seven days of the reference week (14th and subsequent Rounds) have been reported as unemployed.<sup>65</sup> The reference period of one day or one week is adopted primarily to mitigate the difficulties of recall.

66. After the 13th Round, the NSS surveys have normally been spread over a year. Therefore, the resulting estimates of the level of unemployment reflect the average situation over the duration of each Round. However, in rural areas, seasonal variations in the level of unemployment as well as the size of the labour force seem to be very important. Consequently, the average figure of the level of unemployment over the year does not realistically describe the situation prevailing during any period of the year. Separate estimates for the six sub-rounds would be better; but with the present sample, they might be subject to a relatively high sampling error.

67. In some of the NSS Reports on the initial surveys of employment and unemployment, the estimated percentage of unemployed persons was used to calculate the number of unemployed persons in the country. On the basis of the 9th Round data collected from sub-samples 1 and 2, surveyed during May-August 1955, Professor P.C. Mahalanobis stated in his Foreword to the Report that "the estimated number of unemployed came to about 1.3 million in urban areas and 0.9 million in rural areas".<sup>66</sup> Since the 9th Round data on the economic activity of respondents were collected on the basis of 'usual status' approach or with a long reference period of a year, those who reported "seeking work" as their "major activity" were classified as unemployed and were presumed to be "out of employment for a long period" who "had been in search of work during the same period".<sup>67</sup> This presumption perhaps overlooked the likelihood that some of the unemployed might be new entrants into the labour force. However, the resulting estimate of the level of unemployment was believed to indicate chronic unemployment.

68. Some users of the NSS, including the Planning Commission, followed the same approach to estimate the number of unemployed persons even subsequently when the NSS recorded the data on the economic activity of the population on the basis of a short reference period of one day

<sup>65</sup>Sudhir Bhattacharyya, "A Note on the Concepts of Employment and Unemployment Adopted by the NSS", Appendix I.

<sup>66</sup>Beginning with the 16th Round, the urban labour force surveys of the NSS do not identify persons 'not seeking but available for work' as unemployed. Also, the unemployed must be seeking full-time work and specific criteria have been laid down to ascertain active search for jobs.

<sup>67</sup>See the NSS, No. 16, *Report on Employment and Unemployment*, Ninth Round: Preliminary, May-November, 1955, Delhi, 1959, p. iv.

<sup>68</sup>*Ib id*, see also pp. 3-4.

and later one week. The resulting NSS estimates indicated the average percentage of persons (in the labour force or population) who were unemployed for (at least) the duration of the reference period (one day or one week), during the period of the survey. In other words, the estimate referred to the manweeks (or mandays) of unemployment in relation to manweeks (or mandays) of labour force or population. Yet, when this figure was multiplied with the estimated (rural or urban) population in the country, it was erroneously assumed that even in rural India, the resulting figure indicated the number of persons who were unemployed throughout the year or at least chronically.

69. The fallacy can be illustrated by an example. Assume that all persons in the labour force in a given population were employed for 48 weeks and unemployed for 4 weeks in a year. A survey uniformly spread over 52 weeks, with a reference period of one week to record the economic activity of the population, would estimate 7.7 per cent or one-thirteenth of the persons in the labour force to be unemployed. The estimate really indicates man-years of unemployment or the extent of underutilization of labour force. It would be incorrect to interpret it as the proportion of chronically unemployed persons.

70. Admittedly, the situation in rural India does not correspond to the conditions assumed in the above example. Yet, at least during the peak agricultural seasons, almost everyone seeking work can find it. The number and timing of the peak seasons probably varies from region to region depending on the crop pattern and the frequency of cropping. Those who remain unemployed even during the peak season must be very special cases. We need to identify the extent of such unemployment and the related situation. Of course, for many persons in rural India, particularly agricultural labourers, employment even during the busy season tends to be intermittent and slack season unemployment is a serious problem. For the cultivators, if a wider reference period coterminous with the typical production period (such as the normal agricultural season) were used in a survey, many of those found to be unemployed during a short reference period would be considered underemployed (working for less than the desired duration of time).

71. Some interesting information pertinent to this subject is available from the NSS Rounds undertaken during 1956—60, in which those classified as unemployed were asked whether they had "a job or enterprise at a future date". The data, summarized in Table 19, show that between 40 and 65 per cent of the unemployed had some job or enterprise at a future date. Apparently, no question was asked about the nature of the job or enterprise the respondent expected to take up in the future. As a result, one does not know how many of them were seasonally unemployed agricultural workers. Also one might have some reservations about the validity of answers to a question about the intrinsically uncertain future. But as might be expected, the percentage of new entrants tends to be smaller among those reporting a job or enterprise at a future date.<sup>30</sup> Thus the data are not implausible and quite probably they suggest an interesting facet of the prevailing situation. With some supplementary questions on the duration of unemployment and the nature of future job or enterprise which the respondents expected to take up, the data such as those presented in Table 19 can be quite meaningful.

72. The effect of the reference period on the estimate of the level of unemployment, already noted above, needs some discussion. If even nominal work during the reference period entitles a person to be classified as 'employed' a wide reference period naturally lowers the chance of a person being found unemployed. This is evident from the estimates of the level of unemployment from the 11th, 12th and 13th Rounds presented earlier in Tables 6 and 7. In these Rounds, the NSS had collected data on economic activity with a simultaneous use of a dual reference period of a day and a week. The wider reference period naturally gave a lower estimate of unemployment.

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<sup>30</sup>The data on the proportion of new entrants among all unemployed are discussed below in Section V.

TABLE 19

*Some Characteristics of the Unemployed in Rural and Urban India, According to Whether They Had a Job or an Enterprise at a Future Date, as Reported by the Specified Rounds of the National Sample Survey*

Round/Period	Unemployed with Job or Enterprise at a Future Date			Unemployed Not with Job or Enterprise at a Future Date			Sample Persons (All Unemployed)
	As % of Population	As % of All Unemployed	% of New Entrants	As % of Population	As % of All Unemployed	% of New Entrants	
RURAL MALES							
11th and 12th (1956-57)	1.25	50.40	7.20	1.23	49.60	11.38	3,439
14th (1958-59)	1.22	58.94	8.20	0.85	41.06	15.29	352
15th (1959-60)	0.94	50.81	13.83	0.91	49.19	17.58	1,993
RURAL FEMALES							
11th & 12th (1956-57)	1.12	50.68	1.79	1.09	49.32	2.75	3,113
14th (1958-59)	1.41	53.82	1.42	1.21	46.18	3.31	437
15th (1959-60)	0.91	46.19	4.40	1.06	53.81	4.72	1,434
URBAN MALES							
11th & 12th (1956-57)	1.73	43.58	29.48	2.24	56.42	33.48	613
13th (1957-58)	1.69	46.69	22.49	1.93	53.31	29.53	1,066
14th (1958-59)	1.22	65.43	36.88	0.64	34.57	42.19	367
15th (1959-60)	1.34	51.54	41.79	1.26	48.46	42.86	508
URBAN FEMALES							
11th & 12th (1956-57)	0.33	39.76	18.18	0.50	60.24	36.00	211
13th (1957-58)	0.50	40.65	12.00	0.73	59.35	13.70	280
14th (1958-59)	0.23	54.13	13.04	0.20	45.87	40.00	70
15th (1959-60)	0.39	46.99	25.64	0.44	53.01	20.45	127

SOURCES: The National Sample Survey, Reports No. 52 (pp. 57, 59); 100 (p. 37); 148 (Draft) (p. 28); 52 (pp. 114, 116); 63 (pp. 51, 53); 85 (pp. 48, 52); 169 (Draft) (pp. 24, 26).

73. Interestingly, however, the 1961 Census data are not wholly consistent with the above hypothesis regarding the effect of reference period on the estimate of unemployment. In Table 20, the estimate of unemployment based on the 1961 Census has been compared with that reported by the 16th and the 17th Rounds of the NSS. It was argued earlier that because of the wide reference period adopted to enumerate seasonal workers, the 1961 Census reported a low level of rural unemployment. However, despite the fact that the reference period used by the Census to enumerate the non-seasonal workers was a fortnight, compared to a week in the NSS Rounds, the incidence of unemployment among males in urban India, reported by the 1961 Census, was a little higher than that reported by the 16th and 17th Rounds of the NSS in urban areas. In the case of urban females, however, the difference was in the expected direction and relatively much larger. The 16th Round data really pertain to the period July–December, 1960 because the planned second visit to the sample households could not be undertaken. Besides, any seasonal influx into urban areas of the unemployed from rural areas would probably occur during the slack agricultural season, usually after December. Therefore, the 16th Round estimates of the incidence of unemployment are somewhat unduly low compared to the 17th Round but the relative position of the NSS and the 1961 Census data on urban unemployment is the same or both the Rounds. Thus it is difficult to explain the higher incidence of unemployment among urban males reported by the 1961 Census.

TABLE 20

*The Data on Unemployment in Urban and Rural India, According to the 1961 Census and the 16th and 17th Rounds of the National Sample Survey*

	1961 Census	NSS Rounds		1961 Census	NSS Rounds	
		16th (1961-61)	17th (1961-62)		16th (1960-61)	17th (1961-62)
		Urban India			Rural India	
Labour Force as % of Population—						
Males	..	54.15	52.30	50.96	58.51	55.67
Females	..	11.25	13.55	10.85	31.45	27.72
Unemployed as % of Population—						
Males	..	1.75	1.29	1.54	0.29	1.44
Females	..	0.16	0.30	0.36	0.03	1.80
Unemployed as % of Labour Force—						
Males	..	3.23	2.47	3.02	0.50	2.59
Females	..	1.42	2.21	3.32	0.10	6.49

SOURCES: (1) Census of India, 1961, Vol. I, *India*, Parts II-B-(i) and I-B (iii), *General Economic Tables*, Tables B-I and B-IX.

(2) The National Sample Survey Reports :

- (1) No. 103, Sixteenth Round, Urban, p. 24.
- (2) No. 127, Seventeenth Round, Urban, p. 19.
- (3) No. 114, Sixteenth Round, Rural, p. 20.
- (4) No. 197 (Draft), Seventeenth Round, Rural, pp. 20—22.

74. It is argued that the NSS surveys understate the level of unemployment by classifying persons who work only nominally as employed. However, at least in urban areas, even if persons working for 28 hours or less during the reference week and available for additional work (i.e. persons working part-time involuntarily) are included in the category of unemployed, the percentage of the latter in the population according to the 17th Round would increase from 0.98 to 1.96 only.<sup>21</sup> The resulting estimate of urban unemployment would still remain significantly below the number of work-seekers registered with Employment Exchanges. One might speculate that the difference between the NSS and the 1961 Census estimates of the level of unemployment among urban males is due to the NSS procedure of classifying persons with nominal work during the reference week as employed. However, in the 1961 Census, also there was no criterion about the quantum of work performed by persons with "regular employment in any trade, profession, service, business or commerce" who were "employed during any of the fifteen days" preceding the date of enumeration. Also, since the census estimate of the level of unemployment among urban females was lower than that reported by the NSS, the contrary observation regarding the estimate of unemployment among urban males cannot be attributed to the absence of any specific criterion about the quantum of work performed by those classified as employed in the NSS.<sup>22</sup>

<sup>21</sup>A similar adjustment of the 18th Round data for urban India would raise the reported percentage of unemployment from 0.65 to 1.28. Note that due to the classification groups of hours of work adopted for the 18th Round, the adjustment includes among the unemployed those working less than 28 hours and available for additional work.

<sup>22</sup>It is recognized, however, that the estimate of the level of unemployment in the economy would become more realistic if each day of unemployment reported by the respondents is taken into account for the purpose. Under this approach, recommended in the main Report of the committee, the incidence of unemployment would be estimated by relating the reported mandays of unemployment to the total number of mandays on which the sample population is classified as 'in the labour force'.

75. Finally, it was suggested in Section III that the unpaid family workers might not seek work outside their family enterprises and, therefore, might be classified as outside the labour force when without work. The empirical validity of this hypothesis could be tested if the unemployed who have worked before are asked about their last occupation, industry and status and the data are tabulated properly. Unfortunately, no information is available on this subject.

### *Employment Exchange Data*

76. As noted earlier, the Employment Exchange data on the number of job-seekers on the Live Register pertain to urban areas and are often interpreted as indicating the level of urban unemployment. If one accepts this interpretation, the volume of urban unemployment suggested by the Employment Exchanges substantially exceeds the figure indicated by the NSS and the 1961 Census. Since the Exchanges do not cover the whole of urban India, the observed discrepancy would appear to be an underestimate.

77. The major point of explanations offered for this discrepancy is that not all persons on the Live Register of Employment Exchanges at any time are unemployed. Many of them tend to be (i) employed persons seeking better or more stable jobs or (ii) students; some of them belong to rural areas; an unknown percentage of them perhaps register at more than one Employment Exchange. The effect of these factors is to inflate the level of unemployment suggested by the Employment Exchange data and quite probably, it is not fully offset by the fact that the registration is voluntary and not all the urban unemployed register with the employment exchanges.

78. An attempt is made to collect information on the proportion of urban unemployed registered with Employment Exchanges through the NSS. Persons classified as unemployed are asked whether they are on the Live Register of any Employment Exchange. In the 9th, 10th and the 15th Rounds, information was collected on the attitude to registration with Exchanges. The responses are tabulated according to the educational level of the unemployed persons. The available information from different Rounds has been summarized in Table 21.

79. It should be noted that these proportions are based on the rather small number of unemployed caught in the net of NSS surveys, and given the wide fluctuations from Round to Round, the validity of these estimates for adjusting the Employment Exchange figures is subject to reservations. The 15th Round estimate is also quite out of line with the corresponding estimates for the earlier and the subsequent Rounds. The sudden rise after the 15th Round in the proportion of unemployed registered with an Exchange appears very surprising. Between the 16th and the 21st Round, the percentage of unemployed reported to be registered has fluctuated between 30.33 (17th Round) and 43.58 (21st Round). As would be expected, the proportion of registrants tends to be much higher among the matriculate and higher educated unemployed persons than among non-matriculate illiterates, or the illiterates. Except in the 15th Round, the percentage of registrants was higher among unemployed males than among females. According to the latest (21st) Round, almost 70 per cent of the unemployed matriculates and 75 per cent of the graduates among males were registered with an Employment Exchange.



TABLE 21

*The Percentage of Unemployed Persons in Urban Indian, with the Specified Educational Level, Reporting Registration with an Employment Exchange according to the Various Rounds of the National Sample Survey*

Rounds	All	Illiterate	Literate but below Matric	Matric but below Graduate	Undergraduate with Technical Education	Graduate and above	Not Recorded
PERSONS							
9th†	15.86 (7611)	3.92 (1239)	12.90 (4289)	33.42* (1416)	—	31.48@ (662)	—
10th	14.46 (5287)	3.46 (84)	12.76 (3038)	— 33.85‡ (1255)	—	—	—
15th	11.30 (635)	2.86 (185)	8.85 (346)	38.04* (82)	33.33£ (10)	41.38 (12)	—
16th	33.47 (1356)	5.39 (N.A.)	28.60 (N.A.)	64.32 (N.A.)	—	59.70 (N.A.)	—
17th	30.33 (4680)	4.04 (188)	28.10 (2043)	61.11 (1821)	49.09 (300)	57.59 (326)	2.14 (2)
18th	40.89 (757)	3.60 (N.A.)	36.85 (N.A.)	71.36 (N.A.)	72.21 (N.A.)	69.82 (N.A.)	—
19th	38.34 (973)	7.08 (151)	35.49 (504)	59.22 (220)	69.71 (45)	53.44 (52)	—
20th	38.36 (857)	5.30 (123)	34.02 (447)	65.76 (204)	65.52 (38)	54.21 (44)	100.00 (1)
21st	43.58 (2235)	11.19 (363)	36.21 (1082)	68.31 (525)	70.95 (130)	69.47 (131)	4.67 (5)
MALES							
15th	12.65 (508)	4.88 (113)	8.79 (312)	37.45* (65)	29.41£ (7)	50.00 (11)	—
17th	32.07 (4095)	5.34 (N.A.)	28.84 (N.A.)	61.56 (N.A.)	44.88 (N.A.)	56.95 (N.A.)	3.49 (N.A.)
18th	42.88 (612)	5.98 (N.A.)	38.21 (N.A.)	73.14 (N.A.)	52.65 (N.A.)	65.26 (N.A.)	—
19th	39.54 (789)	11.03 (89)	35.97 (458)	58.35 (175)	71.66 (29)	51.18 (37)	—
20th	40.55 (696)	9.95 (73)	33.22 (409)	66.39 (160)	76.17 (21)	62.53 (32)	100.00 (1)
21st	44.04 (1807)	14.18 (230)	35.02 (975)	69.86 (403)	68.50 (92)	75.48 (102)	4.67 (5)
FEMALES							
15th	6.62 (127)	0.52 (72)	9.33 (34)	40.74* (17)	—	100.00 (1)	—
17th	21.83 (585)	1.31 (N.A.)	20.08 (N.A.)	58.55 (N.A.)	61.02 (N.A.)	59.89 (N.A.)	—
18th	31.98 (145)	—	22.63 (N.A.)	63.62 (N.A.)	100.00 (N.A.)	89.07 (N.A.)	—
19th	32.86 (184)	1.79 (62)	27.99 (46)	62.30 (45)	66.82 (16)	61.15 (15)	—
20th	29.60 (161)	—	43.15 (44)	63.07 (44)	51.84 (11)	36.25 (12)	—
21st	41.56 (428)	5.89 (135)	47.93 (103)	63.00 (123)	77.09 (38)	47.45 (29)	—

†Data for the 9th Round are based on Sub-Samples 1 and 2 only.

\*Matric only.

@Above Matric.

‡Matric and above.

£Persons with education up to Intermediate.

NOTE: Figures in parentheses indicate the number of unemployed persons with the particular educational qualification, in the sample.

SOURCE: National Sample Survey, Reports No. 62 (p. 15); 34 (p. 148); 103 (p. 50); 127 (p. 64); 164 (Draft) (p. 36); 169 (Draft) (pp. 98—100); 181 (Draft) (p. 58); 189 (Draft) (pp. 64—66); 209 (Draft) (p. 112).

80. As for other factors, a recent survey of 18,000 job-seekers on the Live Register on March 1, 1968 has provided the first estimates of the proportion of registrants already employed or from rural areas.<sup>83</sup> This information is shown below in Table 22.

81. It should be noted that the percentage from rural areas was lower among graduate job-seekers than among the non-graduates; yet about one-fifth of them were from rural areas. Quite probably, these persons return to their rural native places because of the want of urban jobs, the high cost of living in towns and the availability of material and moral support from their families in the villages. The rural-urban dichotomy is, therefore, not altogether satisfactory in this respect. While it is necessary to recognise the rural-urban location of the registrants for comparing the NSS estimates of urban unemployment with the number of persons on the Live Register, even the registrants from rural areas are probably in search of urban or urban-type jobs.

82. Moreover as in the NSS, a person having some work, however nominal, during the week preceding the date of interview was classified as employed in the D.G.B.T. Survey. It is only to be expected that persons registered with the Employment Exchanges would indeed try to obtain some means of support pending their placement by the Exchange. Until they obtain a satisfactory job, they may not ordinarily report the fact of their having found such work to the Employment Exchange in the hope of obtaining a better opportunity. Among the registrants classified as employed in the D.G.B.T. Survey, about 58 per cent had work for normal working hours relevant to the particular occupation and were classified as having regular employment. Of those classified as non-regularly employed, 75 per cent had worked for 25 hours or more during the reference week.<sup>84</sup> According to the information on the monthly earnings, 85 per cent of the employed registrants had an income of less than Rs 200.<sup>85</sup> Persons with such low incomes naturally seek the assistance of Employment Exchanges for better jobs.

TABLE 22

*Percentage of Rural Residents among Jobs seekers Registered with Employment Exchanges and the Activity Status of the Urban Job-Seekers according to their Educational Level*

Educational Level of Job-Seekers	From Rural Areas	Activity Status of Urban Job-Seekers			
		Employed	Unemployed	Students	Total
1. Graduates and above:	21.2	36.5	50.4	13.1	100.0
(a) Technical/Professional	13.3	41.7	53.9	4.4	100.0
(b) Arts, Science, Commerce	23.3	35.0	49.4	15.6	100.0
2. Matriculates but below graduate.	35.4	33.9	52.3	13.8	100.0
(a) With technical/professional degree/diploma	39.5	38.6	55.2	6.2	100.0
(b) Others	37.9	31.6	50.9	17.5	100.0
3. Literates below matriculation	36.7	51.2	46.7	2.1	100.0
4. Illiterates	26.0	46.2	53.8	—	100.0
All categories	34.4	43.5	49.6	6.9	100.0

SOURCE: D.G.B.T., *Report on Survey to ascertain the Proportion of Employed Persons on the Live Register of Employment Exchanges*, New Delhi, cyclostyled, 1969, p. 10; and a communication to the Committee of Experts on Unemployment Estimates.

83. One might note here the possibility that the proportion of employed registrants reported by the D.G.B.T. survey might be an underestimate because of the likely effort by the respondents to ensure consistency between their answers and the fact of their registration with an Employment Exchange. The monthly income reported might also be understated. However, it is also true that under the prevailing inflationary conditions, an urban resident needs a much higher income than was reported by the employed registrants in the D.G.B.T. survey even if he aims at a very modest level of living. In the ultimate analysis, one cannot separate the question of level of income from that of a job or work.

<sup>83</sup>D.G.B.T. *Report on Survey to Ascertain the Proportion of Employed Persons on the Live Register of Employment Exchanges*, New Delhi, cyclostyled, 1969.

<sup>84</sup>*Ibid.*, pp. 19-20

<sup>85</sup>*Ibid.*, p. 38. The percentage distribution of the employed job-seekers by monthly income was as follows:—

(a) Less than Rs 50	: 12.3	(d) Rs 200 — Rs 299	: 5.4
(b) Rs 50 — Rs 99	: 33.8	(e) Rs 300 — Rs 399	: 1.3
(c) Rs 100 — Rs 199	: 34.1	(f) Rs 400 or more	: 0.3

For the remaining 7.8 per cent, information was not available on the subject.

84. As for the student registrants, it is difficult to judge whether they continue studies because of the non-availability of jobs. Some of them perhaps seek part-time or vacation jobs and other would prefer to study in the morning or evening colleges if they can combine earning with learning. (At least in Greater Bombay, many of the students of liberal Arts Colleges tend to be full-time employees who study outside the office hours). It is also possible that since the Employment Exchanges refer the names of registrants to potential employers according to seniority in registration, students register in anticipation of completion of their academic studies.

85. The preceding observations lead to the conclusion that the factors that tend to inflate the number of persons on the Live Register of Exchanges are complex. The "live" registrations reflect demand for income and/or better jobs even if they do not reflect chronic unemployment. From the point of view of mitigating social discontent, demands of both types need attention. However, the basic purpose of Employment Exchanges is to bring about an expeditious matching between the job requirements of the registrants and the labour requirements of the established employers, i.e., to minimise the extent of frictional employment. A study of the extent to which the Employment Exchanges fulfil this role and assist job-seekers with different characteristics will naturally be of intrinsic interest. It might also indicate the broad trends in the job market. But to interpret the figures of the number of persons on the Live Register of Exchanges as indicating the volume of urban unemployment will be a dubious exercise. As noted above, some of the necessary correction factors are available only from the recent D.G.E.T. survey of persons on the Live Register. The applicability of the other correction factor based on the NSS estimate of the proportion of unemployed registered at an Exchange is also subject to reservations<sup>86</sup>.

86. Therefore, the present study will not attempt to compare the absolute figures of persons on the Live Register of Exchanges with the 1961 Census and the NSS estimates. We shall, however, examine the extent of similarity in the characteristics of persons classified as unemployed by the census and the NSS and the job-seekers registered with Employment Exchanges. We shall also examine the Employment Exchange statistics to ascertain the time trends.

## V

### THE CHARACTERISTICS OF THE UNEMPLOYED

87. In order to design effective programmes promote fuller utilization of the available labour supply, the characteristics of the unemployed need to be studied in depth. These characteristics include sex, age, educational attainment and/or skill, rural-urban residence, prior work experience (if any), job preferences and regional location. An analysis of the prevailing situation must also focus attention on these variables to permit proper understanding of the underlying factors.

88. For this purpose, it is useful to define the incidence of unemployment in terms of the unemployed as per cent of persons in the labour force. In India, it has often been the practice to show the unemployed as per cent of the population of relevant sex. In the latter case, the denominator includes persons who are neither seeking nor available for work. It is perhaps more meaningful to exclude such persons from consideration while examining the level of unemployment. In defence of the present procedure, it can be said that in view of the seasonal fluctuations in the size and composition of the rural labour force, population is a more stable base to measure the level of unemployment. Perhaps, it is useful to adopt both the indices. However, the following discussion will generally be in terms of the percentage of unemployed in the labour force.

#### *Incidence of Unemployment by Sex*

89. Some data on unemployment were presented earlier in Tables 2, 6, 7, 19 and 20. The unemployed were shown as per cent of the population in some of the tables and as per cent of the labour force in others.

90. According to the NSS estimates for urban India, shown in Table 6, the percentage of unemployed was generally lower among females than among males. The only exception was the estimate for agricultural labour households surveyed during the 11th and the 12th Rounds. In rural India the percentage of unemployed was reported to be higher among females than among males beginning with the 14th Round.

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<sup>86</sup>See J. Krishnamurty, "Employment Exchange Data on Unemployment: An Attempt at Applying Correction Factors", Appendix III.

91. The figures in Table 7 suggest an interesting steady decline in the percentage of rural unemployed males after the 10th Round from 2.48 per cent during the 11th and 12th Rounds (1956-57) to 0.98 per cent during the 21st Round (1966-67). (The only exception is the estimate based on the 17th Round). The decline is attributable partly to the widening of the reference period from one day to one week ; but a continued downward trend in all subsequent Rounds, except the 17th, is somewhat puzzling. The data for rural females do not show a clear trend. The estimates from the 19th and 21st Rounds are based on a relatively small number of households among whom the Integrated Household Schedule was canvassed. One hopes that the data from the 18th and the 20th Rounds will also be tabulated to assess whether the trend was continuous. However, whether the trend reflects a real decline in the extent of rural male unemployment is difficult to judge. Undoubtedly, there was a substantial increase in area under cultivation and irrigation as well as in the production of foodgrains during the decade preceding 1966-67. There was a simultaneous substantial increase in the labour input in agriculture. Of course, the rural male population and the labour force have also increased between 1956-57 and 1966-67. One wonders whether the increase in labour input has exceeded the growth of labour force.

92. If the unemployed are shown as per cent of the labour force, as in Tables 23 and 24 (figures for all ages), the incidence of unemployment among females appears to be higher than among males according to the 13th and subsequent Rounds in urban India and also according to the 10th, 11th and 12th Rounds in rural India. On the other hand, the 1961 Census data report much less unemployment among females than among males both in rural and urban India. (Table 20). The census data for urban areas of different States and Union Territories report higher incidence of unemployment among females in Jammu and Kashmir, West Bengal, Delhi and Tripura (Table 2).

93. Even if the incidence of unemployment is higher among females, their lower labour force participation rates imply a smaller absolute number of females classified as unemployed than of males. It is likely, however, that many of the unemployed females happen to be widows, and divorced or separated women without alternative means of support. As such, they are likely to form a specially disadvantaged group. According to some impressionistic information regarding persons taking advantage of Khadi centres in the country, many of the persons spinning yarn by hand tend to be elderly widows or indigent women. If a welfare programme is to be formulated, characteristics of unemployed females will have to be studied more intensively to take into account the possible availability of other means of supports.

#### *Regional Variations*

94. The 1961 Census data on the incidence of unemployment in urban areas shown in Table 2, indicated that more than 5 per cent of males in the labour force in West Bengal, Manipur, Kerala and Pondicherry to be unemployed. In urban areas of Madras and Maharashtra also, the incidence of unemployment was above the all-India average. The states for which the 17th Round of the NSS reported a higher incidence of urban male unemployment than all-India average included Andhra Pradesh, Assam, Bihar, Kerala, Madras, West Bengal, Delhi and Tripura. The NSS estimates for states are subject to sampling error, which is likely to be larger for states with a small proportion of urban population (and therefore a rather small number of sample households). However, according to both the 1961 Census and the 17th Round of the NSS, urban areas of Kerala, West Bengal and Madras had a higher incidence of urban male unemployment than India as a whole.

95. Table 22-A shows the incidence of unemployment in urban areas of different states and Union Territories, reported by the NSS Rounds between 1963-64 (18th Round) and 1967-68 (22nd Round). The estimates of female unemployment based on the quick tabulation of the 22nd Round data are substantially below those from earlier Rounds and may not reflect a real change in the situation.

96. According to each of the five Rounds, Kerala and Tripura occupied the first and/or the second rank in the incidence of male unemployment. Madras had the third rank in four out of five Rounds (the fourth rank during the one other Round) and West Bengal had the fourth or the fifth rank in three out of five Rounds. In Manipur also, urban male unemployment has apparently been quite high. The consistency of these observations leads one to conclude that relatively to other parts of the country, urban male unemployment has indeed been very high in Kerala, Tripura, Madras, West Bengal and Manipur.

97. The estimates of the incidence of female unemployment are subject to a larger sampling error than those for males because of the low female participation rates in urban areas. However, according to Table 2 as well as 22-A, urban female unemployment was high in Kerala, Tripura, West Bengal and Madras (areas with a high incidence of urban male unemployment) and also in Delhi and Assam.

TABLE 22-A

*Incidence of Unemployment (Unemployed as Percent of the Labour Force) in Urban Areas of different States and Union Territories according to NSS Rounds between 1963-64 and 1967-68*

State/Union Territories	Round									
	18th		19th		20th		21st		22nd	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
India ..	1.91	2.39	1.89	2.32	1.88	2.51	1.52	1.84	1.57	0.43
Andhra Pradesh ..	1.50	2.23	1.75	2.14	1.27	0.49	1.47	1.48	1.24	0.32
Assam ..	1.33	13.25	0.85	4.20	1.10	7.33	1.47	6.52	1.51	0.62
Bihar ..	2.11	2.27	1.83	2.05	1.09	0.90	1.33	1.85	1.28	0.23
Gujarat ..	1.39	0.42	0.69	1.05	1.39	1.61	1.30	1.08	0.94	0.59
Haryana ..	—	—	—	—	0.67	1.68	1.25	1.59	0.69	0.29
Jammu & Kashmir ..	1.03	4.97	0.42	2.42	0.87	—	0.43	2.14	0.72	0.04
Kerala ..	5.65	8.02	4.93	7.20	4.96	6.57	4.84	7.11	4.03	1.86
Madhya Pradesh ..	1.89	3.46	1.29	0.86	1.70	1.36	1.15	1.60	1.68	0.32
Madras ..	3.80	3.54	3.05	2.48	3.60	3.92	2.71	2.19	2.55	0.61
Maharashtra ..	1.71	1.45	2.19	1.83	2.19	1.82	1.54	1.44	1.43	0.39
Bombay City ..	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	1.61	2.11	N.A.	N.A.
Mysore ..	1.41	1.17	2.09	2.06	1.67	3.69	1.53	1.71	2.12	0.69
Orrisa ..	1.71	2.62	0.96	2.52	1.01	2.07	1.15	2.52	1.06	0.06
Punjab ..	0.58	—	0.72	0.86	1.64	2.56	0.82	0.39	1.45	0.31
Rajasthan ..	1.09	2.10	1.69	1.15	1.57	0.14	1.32	0.36	0.64	0.12
Uttar Pradesh ..	1.14	0.60	1.42	2.05	1.23	0.97	0.67	0.55	0.68	0.07
West Bengal ..	2.51	4.81	2.20	2.69	1.55	7.57	1.43	2.04	2.28	0.56
Chandigarh ..	—	—	—	—	—	—	0.59	—	N.A.	N.A.
Delhi ..	1.72	2.43	0.55	4.50	1.67	5.68	0.91	3.74	0.58	0.29
Himachal Pradesh ..	—	—	0.79	—	2.52	—	—	—	1.86	1.38
Manipur ..	3.08	1.03	2.45	—	2.02	0.55	3.32	0.20	1.50	0.21
Tripura ..	3.87	8.74	3.48	17.79	4.13	11.58	4.17	16.64	4.62	4.41
Goa, Daman & Diu ..	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	0.45	—	1.59	1.11
Pondicherry ..	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	2.95	2.40	2.74	1.35

SOURCE : The National Sample Survey, Report Nos. 164 (Draft) (pp. 11-12) ; 181 (Draft) (pp. 18-19) ; 189 (Draft) (pp. 14-15) ; 209 (Draft) (pp. 31-32) ; and typescript tables based on quick tabulation for the 22nd Round.

Different Rounds of the NSS were conducted during the following periods :—

18th Round : February, 1963 — January, 1964 ;  
 19th Round : July, 1964 — June, 1965 ;  
 20th Round : July, 1965 — June, 1966 ;  
 21st Round : July, 1966 — June, 1967 ;  
 22nd Round : July, 1967 — June, 1968.

98. It is difficult to judge the effect of high male unemployment on the extent to which females seek work in urban areas of different States and Union Territories. Two alternative reactions are considered likely. According to the additional income hypothesis, unemployment of men would induce the female members of the family to look for work and earn some income. The discouragement hypothesis on the other hand, postulates that the inability of males to find jobs would discourage females from making any attempts to obtain an employment opportunity. To examine the extent to which these alternative tendencies operate in India, we need detailed data that are not available. However, information on regional variations in the incidence of unemployment is of vital importance for formulating any special programmes to create additional job opportunities. It is necessary, therefore, to increase the size of the NSS sample appropriately to obtain reasonably stable estimates of the characteristics of the unemployed and the labour force in different parts of the country.

### *Incidence of Unemployment by Sex and Age*

99. Tables 23 and 24 show the incidence of unemployment by sex and age in rural and urban India according to the various Rounds of the NSS. Table 25 shows similar estimates based on the 1961 Census count of the unemployed, adjusted by the present author to obtain their distribution by five-year age-groups.<sup>81</sup>

100. It is striking that among urban young men aged 15—19, between 10 to 15 per cent of those available for work were found unemployed. Even in the next age-group of 20—24, the reported incidence of unemployment among males often exceeded 5 per cent. The corresponding data for females show wider fluctuations but even among them, the incidence of unemployment was much higher in the age-groups 16—26 or 15—24 than the level reported for women of all ages.

101. In rural India also, the incidence of unemployment is higher in those ages of entry into the labour force than the level for males or females of all ages but the absolute level is substantially lower than that reported for the urban population. The high incidence of unemployment in ages 15—24 or 16—26 is hardly surprising because in a situation where employment opportunities do not expand rapidly, the new entrants into the labour force naturally bear the brunt of the unemployment problem. Those formulating the employment policy must pay particular attention to these critical age-groups. We shall revert to this point later.

TABLE 23

*The Incidence of Unemployment (Unemployed as Percent of the Labour Force) in Rural India, by Sex and Age, according to the National Sample Survey Data for Specified Rounds*

Age	Males			Females			
	9th Round	10th Round	11th & 12th Rounds	9th Round	10th Round	11th & 12th Rounds	
7—15	..	0.92	2.33	3.76	0.06	3.16	7.54
16—17	..	2.92	5.05	6.01	0.59	2.19	10.17
18—21	..	2.78	5.05	6.69	0.56	2.79	10.24
22—26	..	1.26	1.87	5.24	0.24	3.24	9.64
27—36	..	0.23	1.29	3.97	0.18	3.00	9.36
37—46	..	0.12	1.12	3.91	0.25	1.93	10.26
47—56	..	0.16	1.62	3.65	0.08	2.40	9.45
57—61	..	0.33	1.04	3.99	—	—	8.94
62+	..	0.71	0.03	4.55	—	0.88	9.33
All Ages	..	0.85	2.01	4.50	0.23	2.62	9.48

<sup>81</sup>Pravin Visaria, "Estimates of Participation Rates and the Labour Force for India, 1961—1981", Appendix V.

TABLE 23—concl'd

*The Incidence of Unemployment (Unemployed as Percent of the Labour Force) in Rural India, by Sex and Age, according to the National Sample Survey Data for Specified Rounds—contd.*

Age	Males		Females		Age	Males		Females	
	14th Round	15th Round	14th Round	15th Round		16th Round	17th Round	16th Round	17th Round
5—11 ..	2.88	1.44*	7.00	10.34*					
12—14 ..	3.78	3.54	10.35	7.20	5—9	3.05	5.45	1.67	4.31
15 ..	5.71	4.13	12.01	5.46	10—14	2.69	2.74	6.44	7.75
16—17 ..	5.41	3.82	10.29	12.71	15—19	3.42	6.39	8.60	10.13
18—21 ..	5.69	5.07	12.27	9.73	20—24	2.99	4.72	8.77	9.30
22—26 ..	3.72	3.47	10.34	7.84	25—29	2.55	3.74	6.63	8.96
27—36 ..	3.05	2.67	9.40	7.83	30—39	2.06	5.45	5.88	8.19
37—46 ..	2.78	3.02	8.91	7.19	40—49	2.55	3.04	5.11	8.15
47—61 ..	3.20	2.99	10.03	9.42	50—59	2.44	2.76	6.11	7.69
62+ ..	4.14	2.21	8.18	5.81	60+	2.34	2.52	4.70	7.21
All Ages ..	3.64	3.17	9.83	8.35	All Ages	2.59	3.74	6.49	8.53

\*Figures refer to the age group 0—11.

The various NSS rounds were undertaken during the time specified below:

Round	Survey Period	Reference Period	NSS Report No.	Pages
9 ..	May–November, 1955	Usual status/a year	62	88—90
10 ..	December, 1955—May, 1956	One Day	34	42—44
11 & 12 ..	August, 1956—August, 1957	One Day	52	57—59
14 ..	July, 1958—June, 1959	One Week	100	47
15 ..	July, 1959—June, 1960	One Week	148 (Draft)	32
16 ..	July, 1960—June, 1961	One Week	114	22—24
17 ..	September, 1961—July, 1962	One Week	197 (Draft)	20-21

Age	Males		Females	
	19th Round	21st Round	19th Round	21st Round
5—9 ..	1.76	10.65	0.50	16.97
10—14 ..	4.23	4.52	4.95	5.03
15—19 ..	4.34	3.65	8.75	6.99
20—24 ..	3.73	2.49	10.28	4.73
25—29 ..	2.34	1.27	6.85	2.95
30—39 ..	1.71	1.14	7.84	3.25
40—49 ..	2.47	1.05	8.31	3.68
50—59 ..	2.39	1.21	8.83	4.62
60+ ..	1.62	0.85	5.57	3.96
All Ages ..	2.68	11.82	7.85	4.35

The various NSS rounds were undertaken during the time specified below :

Round	Survey Period	Reference Period	NSS Report No.	Pages
19 ..	July, 1964—June, 1965	One Week	201 (Draft)	42—49
21 ..	July, 1966—June, 1967	One Week	Preliminary	Cyclostyled tables

TABLE 24

*The Incidence of Unemployment (Unemployed as Per cent of the Labour Force) in Urban India, by Sex and Age, According to the National Sample Survey Data for Specified Rounds*

Age	Males				Females				
	9th Round	10th Round	11th & 12th Rounds	13th Round	9th Round	10th Round	11th & 12th Rounds	13th Round	
7—15	..	6.33	4.77	8.46	15.16	2.59	3.83	6.35	7.93
16—17	..	14.90	13.61	16.43	13.26	8.93	10.32	19.56	10.45
18—21	..	17.72	17.37	18.44	14.90	9.05	8.02	12.43	18.56
22—26	..	8.25	7.51	8.48	7.92	4.40	5.97	7.30	12.45
27—36	..	2.92	3.72	4.90	4.49	2.39	4.26	5.55	6.43
37—46	..	2.36	3.21	4.97	4.05	1.19	2.72	4.05	8.15
47—56	..	1.99	2.98	4.86	4.90	0.53	1.58	3.64	8.50
57—61	..	1.99	2.65	7.52	6.36	0.79	0.55	3.63	9.01
62+	..	2.49	2.39	2.48	4.80	0.15	1.25	4.70	6.03
All Ages	..	5.75	6.01	7.55	6.88	3.02	4.22	6.47	9.49

Age	Males		Females		Age	Males		Females	
	14th Round	15th Round	14th Round	15th Round		19th* Round	21st Round	19th* Round	21st Round
0—11	..	0.72	6.31	..	..	..	..	..	..
12—14	..	6.02	14.70	..	3.69	5—9	1.48	..	..
15	..	7.23	9.79	..	9.73	10—14	3.79	1.26†	2.96
16—17	..	15.86	17.58	2.61	16.62	15—19	10.01	5.61	14.18
18—21	..	9.59	11.91	8.96	11.76	20—24	3.99	4.06	12.57
22—26	..	4.93	5.78	4.97	7.57	25—29	2.81	1.40	12.25
27—36	..	1.84	2.46	3.05	4.83	30—39	0.53	0.53	6.10
37—46	..	1.43	1.96	2.00	5.07	40—49	1.16	0.47	3.53
47—61	..	1.98	3.32	5.14	4.70	50—59	2.92	0.52	5.82
62+	..	1.86	1.72	1.82	6.83	60+	1.21	0.17	1.88
All Ages	..	3.57	4.97	3.67	6.70	All Ages	2.63	1.52	7.31

\*The data are based on the integrated household schedule.

†These figures refer to persons aged 14 years only.

The various NSS Rounds were undertaken during the time specified below :

Round	Survey Period	Reference Period	NSS Report No.	Pages
9	.. May-November, 1965	Usual status/a year	62	189—191
10	.. December, 1955-May, 1966	One day	34	97—99
11 & 12	.. August, 1956-August, 1957	One day	52	114—116
13	.. September, 1957-May, 1958	One day	63	51—53
14	.. July, 1958-June, 1959	One week	85	48—53
15	.. July, 1959-June, 1960	One week	169 (Draft)	24—26
19	.. July, 1964-June, 1965	One week	201 (Draft)	89
21	.. July, 1966-June, 1967	One week	209 (Draft)	35



TABLE 24 (CONCLD)

*The Incidence of unemployment (Unemployed as Percent of the Labour Force) in Urban India, by Sex and Age, According to the National Sample Survey Data for the 16th and the 17th Rounds*

Age		Males		Females	
		16th Round	17th Round	16th Round	17th Round
10—14	..	0.92	2.40	1.61	0.79
15—19	..	8.10	10.93	5.22	9.92
20—24	..	6.00	6.63	4.40	6.90
25—29	..	2.22	2.33	2.32	2.55
30—39	..	0.91	1.12	1.46	2.22
40—49	..	0.91	1.24	1.11	1.26
50—59	..	0.96	1.88	1.86	1.11
60 and above	..	0.49	..	0.07	..
Total	..	2.47	2.93	2.21	3.10

The estimates for the 17th Round refer to the data collected during the first visit only because the percentage age distribution of population in labour force is not available for the second visit. According to the combined data for the two visits, the incidence of unemployed for all ages was 3.02 and 3.32 per cent for males and females respectively.

The various NSS Rounds were undertaken during the time specified below :

Round	Survey Period	Reference Period	NSS Report No.	Pages
16	.. July, 1960-June, 1961	One week	103	16, 24, 31
17	.. September, 1961-July, 1962	One week	127	15, 19, 46

TABLE 25

*The Incidence of unemployment by Sex, Age and Rural-Urban Residence in India, 1961 Census Estimates  
(Per cent)*

Age		Urban India		Rural India	
		Males	Females	Males	Females
10—14	..	3.42	0.26	0.38	0.11
15—19	..	10.90	4.28	1.51	0.20
20—24	..	6.37	3.38	1.09	0.23
25—29	..	2.91	1.39	0.53	0.12
30—34	..	1.74	0.86	0.33	0.09
35—39	..	1.57	0.62	0.21	0.04
40—44	..	1.30	0.48	0.17	0.04
45—49	..	1.38	0.48	0.16	0.04
50—54	..	1.38	0.40	0.15	0.05
55—59	..	1.38	0.32	0.13	0.06
60—64	..	1.72	0.64	0.13	0.07
65—69	..	1.23	0.45	0.12	0.10
70—74	..	0.80	0.35	0.11	0.12
75+	..	0.32	0.34	0.10	0.14
Age not stated	..	1.88	0.27	0.64	0.77
10 and over	..	3.25	1.41	0.51	0.11

NOTE :—The incidence of unemployment shows the unemployed as per cent of the labour force or the economically active population (employed *plus* unemployed).

All unemployed in the age group 0—14 are assumed to be aged 10—14.

### *The Age Composition of the Unemployed*

102. It is a logical corollary of the preceding observations that the age composition of the unemployed tends to be significantly different from that of the population. In Annexure III we have shown the age distributions of the unemployed reported by the NSS and the 1961 Census and of the job-seekers registered with Employment Exchanges. The data from all the three sources show a marked concentration of the unemployed or job-seekers in ages 16—26 or 15—24, particularly in urban India. The extent of such concentration is shown in Table 26 below. In interpreting this table, one should bear in mind the fact that the NSS data from the 9th to the 15th Rounds cover 11 years of age while the other data pertain to a ten-year age group. Moreover, the NSS estimates are subject to sampling error.

103. From the 9th to the 15th Rounds, the NSS found between 47 and 67 per cent of the unemployed men in urban India to be in the age group 16—26. Beginning with the 16th Round, the proportion of unemployed males aged 15—24 has steadily exceeded 60 per cent. The proportion of urban unemployed females aged 16—26 or 15—24 has always been below that of males but it has been rising almost steadily since the 13th Round.<sup>38</sup> The NSS data on rural unemployment are based on fewer Rounds than the urban data but interestingly, the proportion of rural unemployed men aged 16—26 or 15—24 has generally been between 29 and 40 per cent according to all except the 9th and the 10th Rounds. Similarly, except during the 9th Round, the proportion of rural unemployed females in the age groups under consideration was generally below 34 per cent.

104. The 1961 Census tables do not show a detailed age distribution of the rural unemployed;<sup>39</sup> but the proportion of urban unemployed enumerated during the census in the age group 15—24 seems to be reasonably close to that reported by the 16th and the 17th Rounds of the NSS. As noted in Table 20, the census reported a lower incidence of unemployment among urban females than the NSS, however it seems to have found a somewhat higher proportion of them to be in the age group 15—24. The contrary was true for the urban unemployed males. One might be tempted to infer, therefore, that the older unemployed women were more likely to be left out of the census net than the younger ones. This may be true but the possible errors of age reporting and other problems of comparability do not permit a firm conclusion.

TABLE 26  
*Unemployed Aged 16—26 or 15—24 as Per Cent of All Unemployed of the Same Sex in RURAL and URBAN INDIA, According to (a) the Various Rounds of the National Sample Survey (NSS) (b) the 1961 Census and (c) Employment Exchange Data*

Source/Period	Urban India		Rural India	
	Male	Female	Male	Female
(a) NSS	<i>Unemployed Aged 16—26</i>			
9th Round (May—November, 1955)	67.02	62.31	73.47	56.78
10th Round (December, 1955—May, 1956)	60.80	49.51	51.95	33.80
11th and 12th Rounds (August, 1956—August, 1957)	52.87	48.22	39.99	31.83
13th Round (September, 1957—May, 1958)	47.38	43.31	—	—
14th Round (July, 1958—June, 1959)	61.84	45.21	38.74	33.36
15th Round (July, 1959—June, 1960)	59.34	46.85	37.61	32.23
	<i>Unemployed Aged 15—24</i>			
16th Round (July, 1960—June, 1961)	63.59	47.66	28.84	31.31
17th Round (September, 1961—July, 1962)	60.39	54.64	34.22	30.63
18th Round (February, 1963—January, 1964)	62.52	53.02	—	—
19th Round (July, 1964—June, 1965)	61.15	56.49	N.A.	N.A.
21st Round (July, 1966—June, 1967)	65.84	60.72	36.46	27.64
(b) 1961 Census	56.38	61.90	N.A.	N.A.
(c) Employment Exchange Data				
December, 1967	73.2	68.7	N.A.	N.A.
December, 1968	73.5	68.8	N.A.	N.A.

NOTE : For the sources of these data, see Appendix tables.

SOURCES :—(1) National Sample Survey, (a) For Urban India : Reports No. 62, (pp. 190, 192) ; 34, (pp. 98, 100) ; 52, (pp. 113, 115) ; 63, (pp. 52, 54) ; 85, (pp. 50, 54) ; 169 (Draft), (pp. 23, 25) ; 103, (p. 31) ; 127 (p. 48) ; 164 (Draft), (p. 32) ; 181 (Draft), (p. 56) ; (b) For Rural India : Reports No. 62, (pp. 157, 159) ; 34, (pp. 43, 45) ; 52, (pp. 56, 58) ; 100 (P. 58) ; 148 (Draft), (p. 36) ; 114, (pp. 35, 39) ; 197 (Draft), (pp. 23, 25).

(2) Census of India, 1961, Vol. 1, India, Part II-B (iii), *General Economics Tables*, Tables B-VIII and B-IX.

(3) Ministry of Labour, Employment and Rehabilitation, D.G.E. & T., *Employment Review, 1967-68*, pp. 76-77. The figures for December, 1968 are based on a personal communication.

<sup>38</sup>Note, however, the relatively small number of unemployed urban females in the samples, See Annexure III, Table A. 1.

<sup>39</sup>According to the estimates of the present author, about 58.9 per cent of the unemployed males and 50.0 per cent of the unemployed females enumerated by the 1961 Census in Rural India were in the age-group 15—24. These estimates partly depend, however, on the N.S.S. data.

105. Rather interestingly, the proportion of work-seekers aged 15—24 among those registered with the Employment Exchanges at the end of 1967 and 1968 exceeded that reported by the Census and all the Rounds of the NSS, both males and females. One expects that the students or the educated persons who register with the Exchanges on completing their academic studies would be in the age group 15—24. However, according to available information, at the end of December, 1967, a very high proportion of the non-matriculate registrants (68.7 per cent of males and 57.7 per cent of females) was also in the age group 15—24.<sup>40</sup>

106. Thus according to all the three sources of data, a majority of those reported as unemployed or work-seekers in urban areas tend to be in the age group 15—24 (or 16—26). These are the ages at which persons usually enter the labour force and the “new entrants” often form an important proportion of the unemployed. Of course, many children of school-going ages, particularly in rural India, do not enrol in or drop out from schools and start helping their parents in the family enterprises. It can be seen in Table 1 above that about 34 per cent of the boys and 27 per cent of the girls in the age group 10—14 in rural areas were working at the time of 1961 Census, the corresponding figures for urban areas being 11 and 5 per cent. The NSS data on age specific labour force participation rates, presented in Tables 8 and 9, broadly agree with these estimates. Thus, in urban India, entry into the labour force occurs generally after the age of 15, but in rural areas persons start working at an earlier age. This is not surprising because among families that own land or operate a household industry, children start working on the family farm or enterprise as soon as they are able to lend a helping hand. The quantum of work performed by them might be nominal; it rises as they grow older. In fact, in rural areas the problem of finding jobs for the new entrants is likely to be encountered primarily by the landless agricultural workers or craftsmen or persons working as employees in some of the services. This fact might well explain the small proportion, relatively to urban areas, of the rural unemployed in the age group 15—24.

#### *The New Entrants and Other Unemployed*

107. Some evidence on this subject is available from the NSS and the 1961 Census data on the unemployed which classify persons seeking work into those doing so “for the first time” (new entrants) and “not for the first time” (others). The NSS data for rural areas and, up to the 15th Round, for urban areas also provide a separate category of those “not seeking but available for work” who might be called the “inactive unemployed”. These data have been summarised below in Table 27. The unemployed in the particular category are shown as per cent of (a) the population of the relevant sex and (b) all unemployed. In addition, the proportion of those aged 16—26 or 15—24 among the unemployed in the particular category is also shown.

#### *(1) Urban India*

108. The data for urban India indicate that the unemployed “not seeking but available for work” were a very small proportion of all unemployed males but somewhat significant among females. The exclusion of this group from the category of unemployed after the 16th Round introduces an element of non-comparability in the Table. During the 19th Round in urban India, the definition of unemployed adopted for rural areas (which includes persons ‘not seeking but available for work’ among the unemployed) was used while canvassing the Integrated Household Schedule (Schedule 16). The resulting proportion of “inactive unemployed” in the urban population and among all urban unemployed far exceeded the corresponding estimates obtained during the period 1956-60. The reasons for this fact are difficult to understand.<sup>41</sup>

<sup>40</sup>Ministry of Labour, Employment and Rehabilitation, D.G.E. & T., *Employment Review, 1967-68*, pp. 76-77.

<sup>41</sup>One must note, however, the small number of sample persons interviewed in the 19th Round, for the Integrated Household Schedule. The total number of persons interviewed for the schedule was only 23,720. The sampling error of the estimates is, therefore, likely to be relatively high.

TABLE 27

*Selected Characteristics of the Unemployed in URBAN India, According to the Various Rounds of the National Sample Survey*

Round/Period	Unemployed Seeking Work For the First Time			Unemployed Seeking Work Not for the First Time			Unemployed Not Seeking but Available for Work			Sample Persons (All Un- employed)	
	As % of Popu- lation	As % of All Un- employ- ed	% Aged 16—26 or 15—24£	As % of Popu- lation	As % of All Un- employ- ed	% Aged 16—26 or 15—24£	As % of Popu- lation	As % of All Un- employ- ed	% Aged 15—26 or 15—24£		
MALES											
11th and 12th (1956-57)	..	1.26	31.74	84.45	2.40	60.45	39.54	0.31	7.81	34.09	613
13th (1957-58)	..	0.95	26.24	77.68	2.15	59.39	38.42	0.52	14.37	28.33	1,066
14th (1958-59)	..	0.72	38.79	86.19	0.97	52.24	45.30	0.17	8.97	47.02	367
15th (1959-60)	..	1.10	42.31	69.66	1.27	48.84	46.93	0.23	8.85	28.98	508
16th (1960-61)	..	0.60	46.51	N.A.	0.69	53.49	N.A.	—	—	—	3,330
17th (1961-62)	..	0.67	43.51	N.A.	0.87	56.49	N.A.	—	—	—	10,325
18th (1963-64)	..	0.48	50.00	N.A.	0.48	50.00	N.A.	—	—	—	612
19th (1964-65)	..	0.53	55.79	N.A.	0.42	44.21	N.A.	—	—	—	789
19th @	..	0.76*	56.30*	50.44*	N.A.	N.A.	N.A.	0.59	43.70	52.99	167
20th (1965-66)	..	0.49	53.26	N.A.	0.43	46.74	N.A.	—	—	—	696
21st (1966-67)	..	0.45	58.44	83.99	0.32	41.56	40.33	—	—	—	1,807
FEMALES											
11th and 12th (1956-57)	..	0.24	28.92	64.88	0.45	54.21	37.34	0.14	16.87	48.14	211
13th (1957-58)	..	0.16	13.01	69.20	0.65	52.85	37.52	0.42	34.14	42.66	280
14th (1958-59)	..	0.11	25.41	84.48	0.23	53.47	33.23	0.09	21.12	27.78	70
15th (1959-60)	..	0.19	22.89	84.98	0.44	53.01	37.04	0.20	24.10	53.31	127
16th (1960-61)	..	0.14	46.67	N.A.	0.16	53.33	N.A.	—	—	—	480
17th (1961-62)	..	0.18	50.00	N.A.	0.18	50.00	N.A.	—	—	—	1,787
18th (1963-64)	..	0.13	52.00	N.A.	0.12	48.00	N.A.	—	—	—	145
19th (1964-65)	..	0.14	58.33	N.A.	0.10	41.67	N.A.	—	—	—	184
19th@	..	0.22*	22.45*	58.17*	N.A.	N.A.	N.A.	0.76	77.55	33.72	121
20th (1965-66)	..	0.13	50.00	N.A.	0.13	50.00	N.A.	—	—	—	161
21st (1966-67)	..	0.13	65.00	78.12	0.07	35.00	28.40	—	—	—	428

TABLE 27—(concl'd)

*Selected Characteristics of the Unemployed in RURAL India, According to the Various Rounds of the National Sample Survey*

Round/Period	Unemployed Seeking Work for the First Time			Unemployed Seeking Work Not for the First Time			Unemployed Not Seeking but Available for Work			Sample Persons (All Un- employed)	
	As % of Popu- tion	As % of All Un- emplo- yed	% Aged 15-26 or 15-24£	As % of Popu- lation	As % of All Un- emplo- yed	% Aged 16-26 or 15-24£	As % of Popu- lation	As % of All Un- emplo- yed	% Aged 16-26 or 15-24£		
MALES											
11th and 12th (1956-57)	..	0.23	9.28	79.17	1.46	58.87	36.72	0.79	31.85	35.22	3,439
14th (1958-59)	..	0.23	11.11	N.A.	1.26	60.87	N.A.	0.58	28.02	N.A.	352
15th (1959-60)	..	0.29	15.68	N.A.	1.05	56.76	N.A.	0.51	27.57	N.A.	1,993
16th (1960-61)	..	0.16	11.11	70.02	0.63	43.75	24.95	0.65	45.14	22.22	1,161
17th (1961-62)	..	0.20	10.26	75.54	0.70	35.90	29.18	1.05	53.85	29.91	3,381
19th @ (1964-65)	..	0.64*	45.07*	33.39*	N.A.	N.A.	N.A.	0.78	54.93	34.28	285
21st @ (1966-67)	..	0.14	14.29	49.50	0.40	40.82	33.61	0.44	44.89	34.75	230
FEMALES											
11th and 12th (1956-57)	..	0.05	2.26	51.70	1.13	51.13	30.32	1.03	46.61	32.22	3,113
14th (1958-59)	..	0.06	2.29	N.A.	1.47	56.11	N.A.	1.09	41.60	N.A.	437
15th (1959-60)	..	0.09	4.57	N.A.	1.03	52.28	N.A.	0.85	43.15	N.A.	1,434
16th (1960-61)	..	0.04	2.22	50.68	0.52	28.89	31.00	1.24	68.89	39.79	968
17th (1961-62)	..	0.03	1.59	44.22	0.55	29.10	27.30	1.31	69.31	26.14	2,362
19th @ (1964-65)	..	0.67*	31.90*	31.49*	N.A.	N.A.	N.A.	1.43	68.10	25.96	264
21st 1966-67	..	0.06	4.84	51.98	0.41	33.06	28.05	0.77	62.10	25.67	393

£The figures up to the 15th Round are for the age group 16—26, those for the 16th and subsequent rounds are for the age group 15—24.

@ Data are based on the Integrated Household Schedule.

\*The figures pertain to all unemployed seeking work.

NOTE : N.A. refers to the non-availability of the data in the published tables. A dash (—) is entered to indicate that the relevant data were probably not collected.

SOURCES : For Urban India: The National Sample Survey, Reports No. 52, (p. 112 ff) ; 63 (p. 24 ff) ; 85 (p. 19 ff) ; 169 (Draft) (p. 22 ff) ; 103 (p. 24) ; 127 (p. 9) ; 104 (Draft) (p. 12) ; 181 (Draft) (p. 19) ; 201 (Draft) (p. 86) ; 209 (Draft) (p. 30).

For Rural India : The National Sample Survey, Reports No. 52, (p. 55 ff) ; 100 (p. 37 ff) ; 148 (Draft) (p. 28 ff) ; 114 (p. 20 ff) ; 197 (p. 20 ff) ; 201 (p. 39 ff) and some preliminary cyclostyl'd Tables

109. Beginning with the 16th Round, the percentage of new entrants among the urban unemployed males as well as females seems to rise to a level much higher than that reported for earlier Rounds. This is partly due to the fact that after the 15th Round, persons "not seeking but available for work" were not classified as unemployed in the urban labour force surveys by the NSS.

110. As expected, between 70 and 86 per cent of the new entrant unemployed males in urban areas are reported to be in the ages 16—26 or 15—24. The corresponding proportion for females varies between 65 and 85 per cent. Among unemployed "seeking work not for the first time", the proportion of persons aged 15—24 or 16—26 (between 38 and 47 per cent among males and between 28 to 38 per cent among females) is relatively less than among the new entrant unemployed; it is nevertheless much higher than in the urban population (about 18 to 19 per cent). This is not surprising because the young persons are generally more likely to seek a change in job if they find their initial jobs incompatible with their aptitudes or skills or educational qualifications or if job mobility can lead to an improvement in salary and/or status. Even if an attempt to change the job implied a temporary period of unemployment, other members of the family can support them. As persons grow older, they acquire a stake in their existing jobs and their job mobility inevitably declines.

## (2) Rural India

111. In rural areas, the inactive unemployed are a more important category than in urban India, both among males and females. The unemployed seeking work for the first time form a small proportion of the unemployed males and are virtually insignificant among females. A concentration of the new entrant unemployed in the age group 16—26 or 15—24 is observed in the case of males but not among females. The latter fact is however subject to some reservations due to the small number of sample women (in the category of new entrants). As in urban areas, the percentage of those aged 16—26 or 15—24 is not very high among the rural unemployed "seeking work not for the first time". Of course, the proportion of rural population in these age groups would be much lower (15 to 16 per cent) than that of the unemployed who have worked before (between 25 and 37 per cent).

112. According to the 1961 Census data presented in Table A.3 in Annexure II, almost three-fifths of the unemployed males and more than seven-tenths of the unemployed females, both in rural and urban areas, were new entrants "seeking employment for the first time". The presence of some such persons even in the age group 60 and over suggests the possibility of some errors in responses, recording or tabulation. In so far as this hypothesis of errors is correct, the concentration of urban new entrants in the age group 15—24 is understated. On the whole, the age distribution of the urban unemployed, reported by the 1961 Census is generally consistent with that indicated by the NSS.

113. The figures on persons registered with Employment Exchanges do not specifically identify the new entrants into the labour force. However, during 1960—68 more than 68 per cent of the work-seekers on the Live Register has no prior training or work experience. (See Table 36) Quite probably, a large majority of these persons were also new entrants into the labour force.

114. It thus appears that at least in urban areas, the problem of unemployment is most acute among persons who enter the labour market each year. Of course, it would be incorrect to suggest that persons who once find some job do not encounter the problem of unemployment. However, absorption into gainful employment of the new entrants into labour force, whose numbers are likely to swell during the 1970's because of the acceleration of population growth during 1950's becomes difficult partly because the decline in mortality tends to reduce the number of vacancies arising from deaths of people already employed. It is also true that ordinarily the new entrants are not equipped for the positions vacated by persons who withdraw from the labour force due to retirement or death. Moreover, our bureaucratic procedures of recruitment accentuate the problem of frictional employment for this group which has to spend quite a few months as a kind of waiting period before getting a job.

115. The importance of the observed preponderance of new entrants among the urban unemployed for policy formulation is obvious. For this purpose, it will be useful to make separate estimates of entries into and withdrawals from the labour force with due account of the related characteristics such as educational attainment, job preferences, etc. Analytical work in this field is likely to yield rich dividends. Let us turn now to some of the other characteristics of the unemployed.

### *Incidence of Unemployment by Marital Status*

116. The marital status of the unemployed might be taken to indicate the extent of familial obligations of the work-seekers and, therefore, the degree of hardship likely to result from their inability to find jobs. Admittedly, the relationship between marital status and familial responsibilities is not always clear-cut. The never-married might have dependent parents. Similarly, the married women seeking jobs might have to support invalid or handicapped husbands. However, it is probably correct to assume that by and large, the unemployment of the married men tends to cause hardship to a relatively larger group of persons than that of the never-married men or women.

117. The NSS data from some of the Rounds provide estimates of the labour force characteristics of the sample population by marital status. Table 28 shows the incidence of unemployment among persons in the labour force according to their marital status. The relative level of unemployment for each marital status category shows the relevant figure of incidence as per cent of the incidence for all persons.

TABLE 28

*The Incidence of Unemployment and Its Relative Level in Rural/Urban India by Sex and Marital Status According to the Specified Rounds of the National Sample Survey*

#### *(a) Rural India*

Marital Status	ROUND								
	11th and 12th			14th		15th		16th	
	Incidence	Relative Level	Incidence	Relative Level	Incidence	Relative Level	Incidence	Relative Level	
MALES									
Never Married	..	5.61	125	4.98	137	4.10	130	3.80	147
Married	..	4.13	92	3.17	87	2.78	88	2.15	83
Widowed	..	4.63	103	3.58	99	2.98	94	3.37	130
Divorced and Separated	..	6.73	149	5.05	139	5.73	181		
All	..	4.50	100	3.64	100	3.17	100	2.59	100
FEMALES									
Never Married	..	8.71	92	10.02	102	9.61	115	7.55	116
Married	..	9.16	97	9.57	97	8.11	97	6.37	98
Widowed	..	10.65	112	10.07	102	8.31	100	6.46	100
Divorced and Separated	..	15.81	166	16.02	163	10.26	123		
All	..	9.47	100	9.83	100	8.35	100	6.49	100
PERSONS									
Never Married	..	6.09	103	5.89	105	4.94	107	4.45	115
Married	..	5.61	94	5.19	93	4.32	94	3.54	91
Widowed	..	7.91	132	7.47	133	5.77	125	5.10	132
Divorced and Separated	..	10.84	182	10.66	191	7.46	162		
All	..	5.97	100	5.59	100	4.61	100	3.87	100



TABLE 28 (Concl.)

## (b) Urban India

Marital Status	ROUND									
	13th		14th		15th		16th		17th*	
	Incidence	Relative Level	Incidence	Relative Level	Incidence	Relative Level	Incidence	Relative Level	Incidence	Relative Level
MALES										
Never Married ..	14.30	208	10.09	283	13.16	265	6.77	274	8.89	303
Currently Married ..	4.58	67	1.75	49	2.65	53	1.20	49	1.34	46
Widowed, Divorced and Separated ..	6.07	82	3.21	90	2.60	52	1.00	41	1.37	47
All ..	6.88	100	3.57	100	4.97	100	2.47	100	2.93	100
FEMALES										
Never Married ..	12.60	133	5.33	145	14.66	219	6.27	283	10.98	354
Currently Married ..	9.01	95	3.74	102	5.77	86	1.67	76	2.20	71
Widowed, Divorced and Separated ..	10.18	107	3.88	106	4.90	70	1.52	69	1.54	50
All ..	9.49	100	3.67	100	7.00	100	2.21	100	3.10	100
PERSONS										
Never Married ..	14.13	192	9.70	271	8.67	164	6.69	278	9.13	307
Currently Married ..	5.27	72	2.04	57	3.11	59	1.28	53	1.46	49
Widowed, Divorced and Separated ..	8.24	112	3.57	100	3.65	69	1.30	54	1.45	49
All ..	7.35	100	3.58	100	5.28	100	2.41	100	2.97	100

\*The data for the 17th Round are based on the first visit to the selected households.

SOURCES : (a) Rural India ; The National Sample Survey, Reports 52 (pp. 63, 65, 67) ; 100 (pp. 86-87) ; 148 (Draft) (p. 48) ; 114 (p. 27, 29, 31).

(b) Urban India ; The National Sample Survey, Report Nos. 63 (pp. 58, 60 and 62) ; 85 (pp. 77-79) ; 169 (pp. 30, 32 and 34) ; 103 (pp. 17, 32, 56) ; 127 (pp. 19, 21, 43)

## (1) Rural India

118. The data for males as well females in rural areas show the relative level of unemployment to be the lowest for the currently-married and the highest for the divorced and separated (when the group is shown distinct). When the widowed, divorced and separated are grouped into one category, the incidence of unemployment appears to be the highest among the never-married (except among never-married females surveyed during the 11th and the 12th Rounds). Also, the relative level of unemployment among never-married men in rural India seems to rise because during the 11th to the 16th Rounds the decline in the incidence of unemployment among the never-married males was less than among all males. Before attempting to interpret these data, let us first examine the situation reported for urban India.

## (2) Urban India

119. The data for urban India are available from five Rounds. For males, the lowest incidence of unemployment is reported sometimes for the widowed, separated and divorced and sometimes for the currently-married. For females, the lowest incidence is reported for the widowed, divorced and separated. The level of unemployment among the currently-married females is intermediate between that of the never-married and the widowed, etc. Unemployment among the never-married appears to be relatively much higher, both among males and females.

120. The factors likely to account for the relatively greater unemployment among the never-married are complex. In part, it is a correlate of the age of the unemployed, a majority of whom in urban areas tend to be in the age group 15—24 or 16—26 (See Table 24). The unemployed young men probably postpone their marriage until they can support a family. The relatively greater unemployment among never-married females, on the other hand, probably arises from their greater willingness to search for jobs pending marriage (After marriage not many women would actively look for jobs). Also, the never-married can perhaps be selective about the type of job or the level of salary if their parents can support them during their unemployment. Unlike the never-married, the married or the widowed tend to be older in age, with a stake in their jobs and perhaps unwilling to risk even a temporary duration of unemployment. The relatively high incidence of unemployment among the rural divorcees reflects the greater compulsion to earn their livelihood in the absence of their spouses.

### *Incidence of Unemployment by Educational Level*

121. Let us now examine the NSS data on the incidence of unemployment according to the educational attainment of the respondents. In view of the widespread concern in the country about the unemployment of the "educated", i.e., those who have studied up to Matriculation or beyond, it would be interesting to see whether the incidence of unemployment among such persons exceeds that among the less educated. The relevant data have been summarized in Tables 29 and 30. The classification categories used by the NSS have changed from Round to Round; but an attempt has been made to present comparable figures. Let us first consider the data for urban India which accounts for a majority of the "educated" persons as defined above.<sup>42</sup>

## (1) Urban India

122. The data in Table 29 suggest that the incidence of unemployment among persons who have studied up to Matriculation or more was higher than among the non-matric literates and the illiterates. The incidence was the lowest for the illiterates perhaps because of the willingness of such persons to take up manual or menial work.<sup>43</sup>

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<sup>42</sup>Of the 6.95 million men educated up to Matriculation or more, enumerated by the 1961 Census, only 2.29 million or 32.87 per cent were in rural areas. Of the 1.28 million females with similar educational qualifications, only 0.22 million or 17.36 per cent were in rural areas. See : Census of India, 1961, Vol. I, *India, Part II C(i) Social and Cultural Tables*, Table C-III.

<sup>43</sup>Those from rural areas perhaps return to their native villages in the event of prolonged unemployment.

TABLE 29  
The Incidence of Unemployment in Urban India, by Sex and Educational Attainment and Its Relative Level, According to the Specified Rounds of the National Sample Survey

ROUND																							
		10th	11th & 12th	13th	14th	15th	16th	17th	18th	21st													
		Inci- dence Level	Rela- tive Level	Inci- dence Level	Rela- tive Level	Inci- dence Level	Rela- tive Level	Inci- dence Level	Rela- tive Level	Inci- dence Level	Rela- tive Level	Inci- dence Level	Rela- tive Level	Inci- dence Level	Rela- tive Level	Inci- dence Level	Rela- tive Level	Inci- dence Level	Rela- tive Level				
PERSONS																							
1. Illiterate	..	3.30	58	5.52	75	7.04	96	2.03	57	3.80	72	1.20	50	1.21	40	0.84	42	0.70	43				
2. Literate but Below Matric	..	6.90	121	8.34	113	7.68	104	4.49	125	6.27	119	2.66	110	4.26	140	2.26	114	1.70	105				
3. Matric and Above	..	10.57	185	10.55	144	7.15	97	5.61	157	6.81	129	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.				
(a) Matric	..	11.27	197	11.71	159	8.31	113	N.A.	N.A.	N.A.	N.A.	6.98*	289*	5.07*	166*	4.74*	238*	3.07	192				
(b) Intermediate	..	13.48	236	14.19	193	4.78	65	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.				
(c) Graduate and Above	..	5.92	104	5.04	69	5.32	72	N.A.	N.A.	N.A.	N.A.	2.78	116	4.18	137	2.31	116	2.18	136				
4. All	..	5.71	100	7.35	100	7.35	100	3.58	100	5.28	100	2.41	100	3.05	100	1.99	100	1.60	100				
MALES																							
Illiterate	..	3.58	59	5.84	77	6.21	90	1.66	46	3.09	62									0.73	38	0.64	43
Literate but Below Matric	..	6.81	113	8.20	108	7.45	108	4.41	124	5.94	120									2.16	113	1.59	105
Matric and Above	..	9.81	163	9.55	126	6.34	92	5.11	143	6.10	123									N.A.	N.A.	N.A.	N.A.
Matric	..	10.56	176	10.40	138	7.33	107	N.A.	N.A.	N.A.	N.A.									3.88*	203*	2.51	165
Intermediate	..	12.03	200	13.46	178	4.95	72	N.A.	N.A.	N.A.	N.A.									N.A.	N.A.	N.A.	N.A.
Graduate and Above	..	5.17	86	4.45	59	4.44	65	N.A.	N.A.	N.A.	N.A.									2.19	115	1.82	120
All	..	6.01	100	7.55	100	6.88	100	3.57	100	4.97	100									1.91	100	1.52	100
FEMALES																							
Illiterate	..	2.62	62	4.88	75	8.67	91	2.77	76	5.44	81									1.10	46	0.77	42
Literate but Below Matric	..	9.00	213	10.96	169	11.87	125	6.45	176	10.75	160									4.41	185	1.97	142
Matric and Above	..	20.07	476	25.22	390	19.34	204	13.95	381	15.00	224									N.A.	N.A.	N.A.	N.A.
(a) Matric	..	20.13	477	31.29	484	23.74	250	N.A.	N.A.	N.A.	N.A.									15.91*	666*	6.95	500
(b) Intermediate	..	58.66	1391	33.77	522	—	—	N.A.	N.A.	N.A.	N.A.									N.A.	N.A.	N.A.	N.A.
(c) Graduate and Above	..	12.03	285	10.77	166	15.02	158	N.A.	N.A.	N.A.	N.A.									5.79	242	4.44	319
All	..	4.22	100	6.47	100	9.49	100	3.67	100	6.70	100									2.39	100	1.84	100

\*The data pertain to persons classified as "Matric but Below Graduate".

Sources : The National Sample Survey Report 34 (pp. 106, 108, 110); 52 (pp. 127, 129, 131); 63 (p. 67); 85 (pp. 60, 62, 64); 169 (Draft) (pp. 35—37); 103 (pp. 22, 36); 127 (pp. 24, 59-60); 164 (Draft) (pp. 16, 33—35); 209 (Draft) (pp. 44, 113).

Note: The distribution of unemployment according to educational level for the 17th and 18th Rounds has been estimated by the author on the basis of the reported number of persons in the sample with given characteristics.

TABLE 30

*The Incidence of Unemployment in RURAL India by Sex and Educational Attainment, and Its Relative Level, According to the Specified Rounds of the National Sample Survey*

Educational Level		ROUNDS									
		10th		11th and 12th		14th		15th		16th	
		Incidence	Relative Level	Incidence	Relative Level	Incidence	Relative Level	Incidence	Relative Level	Incidence	Relative Level
PERSONS											
1. Illiterate	..	1.84	87	5.86	104	5.66	107	3.71	105	3.72	96
2. Literate but below Matric	..	2.52	119	4.62	82	3.76	71	2.75	78	N.A.	N.A.
(a) Literate but below Primary	..	N.A.	N.A.	N.A.	N.A.	3.44	65	2.40	68	3.51	91
(b) Primary and above but below Matric	..	N.A.	N.A.	N.A.	N.A.	4.18	79	3.25	92	4.03*	104*
(c) Middle School	..	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	6.17	159
3. Matric and above	..	17.24	813	12.78	227	12.59	238	7.98	226	N.A.	N.A.
(a) Matric	..	19.38	914	14.13	251	N.A.	N.A.	N.A.	N.A.	10.99	1284
(b) Intermediate	..	16.64	785	4.99	88	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
(c) Graduate and above	..	..	..	15.24	271	N.A.	N.A.	N.A.	N.A.	3.46	89
4. All	..	2.12	100	5.63	100	5.29	100	5.53	100	3.87	100
MALES											
1. Illiterate	..	1.49	74	4.23	94	3.42	94	3.01	94	2.12	82
2. Literate but below Matric	..	2.65	132	4.81	107	3.77	104	3.37	106	N.A.	N.A.
(a) Literate but below Primary	..	N.A.	N.A.	N.A.	N.A.	3.41	94	2.90	91	2.83	109
(b) Primary and above but below Matric	..	N.A.	N.A.	N.A.	N.A.	4.27	117	4.05	127	3.10*	120*
(c) Middle School	..	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	6.04	233
3. Matric and above	..	17.65	878	12.38	275	12.68	348	9.68	303	N.A.	N.A.

TABLE 30—CONCLD

Educational Level	ROUNDS											
	10th		11th and 12th		14th		15th		16th		17th	
	Incidence	Relative Level	Incidence	Relative Level	Incidence	Relative Level	Incidence	Relative Level	Incidence	Relative Level	Incidence	Relative Level
(a) Matric	..	19.95	993	13.77	306	N.A.	N.A.	N.A.	9.52†	368†	9.08†	243†
(b) Intermediate	..	16.64	828	4.98	111	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
(c) Graduate and above	..	0.00	..	13.67	304	N.A.	N.A.	N.A.	3.47	134	9.27	248
4. All	..	2.01	100	4.50	100	3.64	100	3.19	2.59	100	3.74	100
FEMALES												
1. Illiterate	..	2.67	102	9.56	101	9.95	101	6.24	6.12	94	8.22	96
2. Literate but below Matric	..	0.81	31	6.72	71	6.72	68	6.05	N.A.	N.A.	N.A.	N.A.
(a) Literate but below Primary	..	N.A.	N.A.	N.A.	N.A.	6.59	67	5.59	12.46	192	14.83	174
(b) Primary and above but below Matric	..	N.A.	N.A.	N.A.	N.A.	7.01	71	7.03	19.40*	299*	9.49*	111*
(c) Middle School	..	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	10.39	160	14.85	174
3. Matric and Above	..	..	..	37.92	400	29.49	300	22.60	N.A.	N.A.	N.A.	N.A.
(a) Matric	..	..	..	38.97	411	N.A.	N.A.	N.A.	40.34	622	25.91†	304†
(b) Intermediate	..	..	..	..	..	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
(c) Graduate and above	..	..	..	37.59	397	N.A.	N.A.	N.A.	..	..	42.65	500
4. All	..	2.62	100	9.48	100	9.83	100	6.25	6.49	100	8.53	100

\*The data pertain to persons with primary education only.

†The data pertain to Matriculates and Intermediates together.

‡In the 17th Round, non-graduates with more than middle school education are classified as having "secondary" education. This category is presumed to include matriculates as well as intermediates.

SOURCE: The National Sample Survey, Report 34 (p. 51, 53, 55); 52 (p. 70); 100 (pp. 68-69); 148 (Draft) (p. 41); 114 (pp. 46, 48, 50); 197 (Draft) (pp. 28-31, 38-41, 48-51).

123. When the data for the "educated" are tabulated separately for the matriculates, the graduates and the intermediates, one observes the interesting fact that the incidence of unemployment among the graduates has been significantly lower than among the matriculates and the intermediates. Until the 17th Round (1961-62), unemployment among the graduates was reported to be less than among even the non-matric literates. Thereafter, the situation seems to have changed slightly, and the non-matric literates report lower unemployment than graduates.

124. The lower incidence of unemployment among the graduates than among the matriculates suggests the importance of a degree for finding a job. Apparently the excess-supply of graduates is less than that of matriculates or else, the graduates are employed in positions which do not require a formal degree. This observation indicates the rational consideration behind the widespread preference for college education. However, except during the 13th Round, those who went to college for two years but failed to get a degree seemed to be worse off than even the matriculates in terms of their job prospects. Apparently, one's inability to complete a degree after going to college becomes a greater handicap in finding a job than inability to go to college altogether.

125. The data by sex give the impression that the incidence of unemployment among "educated" females tends to be substantially higher than among males. It should be noted here that the number of sample respondents in the category of "educated" females in the labour force has been rather small, and therefore, the estimates are likely to be subject to a larger sampling error.

126. The reasons for the above differences in the incidence of unemployment according to educational attainment lie in the complex interactions between the number and type (as also the salary level) of jobs that become available in the economy and the supply of school and college-educated persons, and their job preferences and reservation prices (i.e. the expected salaries below which they prefer to remain unemployed). A recent study of unemployment among the graduates in India suggests that "it is not that some people are permanently employed and others are permanently unemployed, but rather that large numbers are made to wait a year or two before finding a first job".<sup>44</sup> Further, in view of the close link between one's starting salary and the eventual salary and low job mobility, the search for employment until a 'satisfactory' job is found seems to be quite rational. We shall review in this connection the data on the duration of unemployment reported by the unemployed. However, let us first examine the data on rural unemployment according to educational attainment.

## (2) *Rural India*

127. The data shown in Table 30, suggest that as in urban India, unemployment was higher among the "educated" than among the non-matriculates. Within the latter category, while the non-matriculate literate males reported higher unemployment than the illiterates, the converse was the case among females. When the data were tabulated for sub-groups of the non-matriculate literates men with more education reported a higher incidence of unemployment. Among females, while the 16th and the 17th Round data (which distinguish between the primary and middle school education) did not show a clear relationship between the level of education and the incidence of unemployment, the earlier Rounds suggested a tendency similar to that observed among males. The data for sub-groups of the "educated" are based on small numbers and are subject to a relatively large sampling error. Therefore, one cannot infer whether the 16th Round data suggesting lower unemployment among graduate males than among non-graduate matriculates represent the situation more faithfully than the 17th Round data which suggest little difference between the two groups in the rates of unemployment.

128. It must be reiterated that the very high incidence of unemployment recorded for educated females in rural areas is subject to the problem of sample size. Yet, educated women in rural areas probably do encounter problems in finding 'satisfactory' jobs (i.e. jobs that would meet their preferences). The rural job market for the educated is certainly more limited than the urban. Presumably, many of the unemployed matriculates in rural areas, particularly men, might be looking for an urban job.

129. It is pertinent to note here the 16th Round data for rural India shown in Table 31, which suggest that the proportion of new entrants increased among the unemployed reporting

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<sup>44</sup>Mark B'aug et al., *The Causes of Graduate Unemployment in India*, Allen Lane The Penguin Press, London, 1969, p. 238.

higher educational attainment.<sup>45</sup> The proportion of active work-seekers among the unemployed males also increased with a rise in the educational attainment. The distribution for unemployed females with primary or more education is based on a very small number of cases. However, this table, though based on only one Round, illustrates the possibility that the rural unemployed with different levels of educational attainment might have fairly dissimilar characteristics. The family backgrounds (in terms of the occupations of the other earners in the family, land holding, etc.) of the unemployed with different educational attainments might also differ ; but unfortunately no information is available on the subject.

#### *The Duration of Unemployment*

130. Those classified as unemployed during the NSS Rounds have often been asked a further question on the duration of their unemployment. The data collected in urban surveys have been tabulated according to the educational attainment of the unemployed and often by sex. These data have been summarized below in Tables 32 and 33. The inter-Round non-comparability of duration classification has been avoided by appropriate adjustment but the differences in the classification of educational level could not be avoided.

131. In interpreting these data, one needs to note the differences in the proportion of unemployed for whom the data on duration of unemployment were not recorded altogether. The proportion of such persons was particularly high during the 13th Round in urban India. Also in the 11th and 12th, and the 13th Rounds (urban), the proportion in the 'not recorded' category was higher for the illiterate unemployed than for the literates, a fact that would affect the comparisons among persons with different educational attainments. However, the data for the 16th and subsequent Rounds seems to be generally comparable.

TABLE 31

*The Percentage Distribution of Rural Unemployed of Each Sex and Educational Attainment According to Their Characteristics, as Reported by the 16th Round of the National Sample Survey*

Educational Attainment	Unemployed Available for				
	New entrants	Other work-seekers	Full-time work	Part-time work	All unemployed
<b>MALES</b>					
Illiterate	6.03	45.70	43.10	5.17	100.00
Below Primary	2.00	41.33	50.00	6.67	100.00
Primary	10.19	47.10	37.86	4.85	100.00
Middle School	25.48	42.74	20.55	11.23	100.00
Matriculates and Intermediates	78.97	10.81	10.22	—	100.00
Graduates and Above	—	—	100.00	—	100.00
All	11.11	43.75	39.58	5.56	100.00
<b>FEMALES</b>					
Illiterates	0.56	30.00	53.33	16.11	100.00
Below Primary	10.53	27.07	51.87	10.53	100.00
Primary	15.41	8.24	63.81	12.54	100.00
Middle School	28.00	18.40	53.60	—	100.00
Matriculates and Intermediates	69.42	—	22.81	7.77	100.00
All	2.22	28.89	53.33	15.56	100.00

SOURCE : The National Sample Survey Report 100, pp. 46, 48.

<sup>45</sup>Unfortunately such classification is not available for the other Rounds of the NSS

TABLE 32

*The Percentage Distribution of Unemployed PERSONS with the Specified Educational Level by the Duration of Their Unemployment, According to the Specified Rounds of the N.S.S. in URBAN India*

Educational Level	Duration of Unemployment					Total	Sample Persons	
	Up to 3 months	3 to 6 months	6 months to 1 year	1 year and over	Not Recorded			
10th Round								
1. Illiterate ..	38.72	55.50	22.87	27.58	5.36	100.00	984	
2. Literate but below Matric ..	16.51	7.62	21.15	48.72	6.00	100.00	3,038	
3. Matric and above ..	10.34	7.43	29.77	44.06	8.40	100.00	1,264	
4. Not Recorded ..	—	—	—	100.00	—	100.00	1	
5. Total ..	20.86	7.05	23.21	42.58	6.30	100.00	5,287	
11th and 12th Rounds								
1. Illiterate ..	51.35	5.98	11.32	11.89	19.46	100.00	331	
2. Literate but below Matric ..	30.16	11.89	17.14	28.39	12.42	100.00	626	
3. Matric and above ..	15.14	9.05	31.46	32.75	11.60	100.00	186	
4. Not Recorded ..	20.25	—	79.75	—	—	100.00	2	
5. Total ..	34.44	9.61	17.64	23.87	14.44	100.00	1,145	
13th Round								
1. Illiterate ..	55.46	5.42	5.45	9.60	24.07	100.00	373	
2. Literate but below Matric ..	31.71	19.14	13.66	28.49	17.00	100.00	554	
3. Matric and above ..	16.20	15.06	33.22	35.22	10.30	100.00	135	
4. Total ..	38.33	8.31	12.49	21.81	19.06	100.00	1,062	
16th Round								
1. Illiterate ..	48.14	9.21	14.38	20.83	7.44	100.00	601	
2. Literate but below Matric ..	22.98	13.59	20.83	41.55	1.05	100.00	2,020	
3. Matric but below Graduate ..	16.62	12.21	19.08	49.88	2.21	100.00	1,008	
4. Graduate and above ..	24.94	18.30	18.24	38.52	—	100.00	176	
5. Not Recorded ..	41.49	—	41.49	17.02	—	100.00	5	
6. Total ..	26.84	12.47	18.97	39.07	2.65	100.00	3,810	
17th Round								
1. Illiterate ..	65.33	11.60	11.29	10.49	1.29	100.00	1,973	
2. Literate but below Secondary ..	29.52	17.22	23.98	28.06	1.22	100.00	6,287	
3. Secondary ..	22.56	21.48	28.52	27.21	0.23	100.00	2,710	
4. Graduates excluding those in technical line ..	24.77	25.32	24.08	25.76	0.07	100.00	442	
5. Rest ..	26.49	20.97	19.81	32.73	—	100.00	59	
6. Total ..	36.91	16.96	21.72	23.47	0.94	100.00	12,112*	



TABLE 32 (contd.)

*The Percentage Distribution of Unemployed PERSONS with the Specified Educational Level, by the Duration of Their Unemployment, According to the Specified Rounds of the NSS in URBAN India*

Educational Level		Duration of Unemployment					Total	Sample Persons
		Up to 3 months	3 to 6 months	6 months to 1 year	1 year and over	Not Recorded		
18th Round								
1. Illiterate	..	53.00	17.83	11.06	8.41	9.70	100.00	129
2. Literate but below Secondary		28.63	20.41	24.08	25.12	1.76	100.00	397
3. Secondary	..	18.57	22.10	30.06	28.50	0.77	100.00	161
4. Rest	..	—	—	—	—	100.00	100.00	1
5. Total	..	30.38	20.54	22.42	23.36	3.30	100.00	757*
19th Round								
1. Illiterate	..	49.57		49.01		1.42	100.00	52
2. Literate but below Primary	..	47.84		52.16		—	100.00	45
3. Primary to below Secondary		42.84		56.00		1.16	100.00	220
4. Secondary	..	47.87		50.08		2.05	100.00	504
5. Graduate and above	..	67.90		23.01		9.09	100.00	151
6. Not Recorded	..	—		—		100.00	100.00	1
7. Total	..	50.17		46.93		2.90	100.00	973
21st Round								
1. Illiterate	..	62.19	12.05	11.33	11.18	3.25	100.00	314
2. Literate but below Secondary		28.33	22.28	26.38	21.24	1.77	100.00	1,068
3. Secondary	..	20.91	22.98	33.49	21.77	0.85	100.00	578
4. Graduates	..	26.99	29.20	22.02	19.01	2.78	100.00	143
5. Other than Graduates having Technical Education	..	30.78	17.44	29.94	21.34	0.50	100.00	128
6. Not Recorded	..	75.07	24.93	—	—	—	100.00	4
7. Total	..	32.25	20.91	25.50	19.56	1.78	100.00	2,235

\*The data for 641 unemployed persons recorded in the 17th Round and 69 unemployed persons recorded in the 18th Round with various technical qualifications could not be aggregated for presentation in the table.

SOURCE : The National Sample Survey, Reports No. 34 (p. 139) ; 52 (p. 143) ; 63 (p. 131) ; 103 (p. 49) ; 127 (p. 63) ; 164 (Draft) (p. 35) ; 181 (Draft) (p. 57) ; 209 (Draft) (p. 117).

TABLE 32 (contd)

*The Percentage Distribution of Unemployed Males with the Specified Educational Level, by the Duration of their Unemployment, according to the Specified Rounds of the N.S.S. in Urban India*

Educational Level	Duration of Unemployment					Total	Sample Persons
	Up to 3 months	3 to 6 months	6 months to 1 year	1 year and above	Not Recorded		
10th Round							
1. Illiterate ..	34.02	6.10	28.05	27.12	4.71	100.00	803
2. Literate but below Matric ..	16.41	7.80	21.48	48.25	6.06	100.00	2,894
3. Matric and above ..	10.55	8.16	28.31	44.12	8.86	100.00	1,136
4. Not Recorded ..	—	—	100.00	—	—	100.00	1
5. Total ..	19.03	7.51	24.13	43.03	6.30	100.00	4,834
11th and 12th Rounds							
1. Illiterate ..	51.41	5.55	14.85	14.67	13.62	100.00	229
2. Literate but below Matric ..	31.68	11.75	17.10	27.75	12.32	100.00	585
3. Matric and above ..	16.14	9.96	27.89	33.98	12.03	100.00	160
4. Not Recorded ..	—	—	100.00	—	—	100.00	1
5. Total ..	33.98	9.85	18.35	25.26	12.56	100.00	975
13th Round							
1. Illiterate ..	33.38	10.24	9.79	14.95	31.64	100.00	224
2. Literate but below Matric ..	23.01	9.40	13.84	28.89	24.86	100.00	508
3. Matric and above ..	4.66	13.97	30.73	32.36	18.28	100.00	119
4. Total ..	23.07	10.23	15.15	25.92	25.63	100.00	851
18th Round							
1. Illiterate ..	50.72	18.81	9.79	11.62	9.06	100.00	76
2. Literate but below Secondary ..	29.12	20.32	24.09	25.21	1.26	100.00	359
3. Secondary ..	19.60	21.57	28.02	29.87	0.94	100.00	128
4. Total ..	29.86	21.05	22.33	24.44	2.32	100.00	612*
19th Round							
1. Illiterate ..	— 47.34	—	— 50.82	—	1.84	100.00	37
2. Literate but below Primary ..	— 54.64	—	— 45.36	—	—	100.00	29
3. Below Secondary ..	— 43.98	—	— 55.08	—	0.94	100.00	175
4. Secondary ..	— 49.47	—	— 48.53	—	2.00	100.00	458
5. Graduate and above ..	— 68.83	—	— 23.19	—	7.98	100.00	89
6. Not Recorded ..	—	—	— 100.00	—	—	100.00	1
7. Total ..	— 50.65	—	— 46.95	—	2.40	100.00	789

\* The data for 49 unemployed males with various technical qualifications recorded in the 18th Round, could not be aggregated for presentation in the Table.

Sources : The National Sample Survey, Reports No. 34 (p. 139) ; 52 (p. 143) ; 63 (p. 131) ; 164 (Draft) (p. 33) ; 181 (Draft) (p. 57).

TABLE 32 (concl'd)

*The Percentage Distribution of Unemployed Females with the Specified Educational Level, by the Duration of their Unemployment, according to the Specified Rounds of the N.S.S. in Urban India*

Educational Level		Duration of Unemployment					Total	Sample Persons
		Upto 3 months	3 to 6 months	6 months to 1 year	1 year and above	Not Recorded		
10th Round								
1. Illiterate	..	52.35	3.76	7.86	28.79	7.24	100.00	181
2. Literate but below Matric	..	18.20	4.52	15.56	56.76	4.96	100.00	144
3. Matric and above	..	9.02	3.00	38.63	43.75	5.60	100.00	128
4. Total	..	33.95	3.79	16.62	39.35	6.29	100.00	453
11th and 12th Round								
1. Illiterate	..	51.21	7.04	2.51	4.96	34.28	100.00	102
2. Literate but below Matric	..	17.13	13.96	17.64	34.47	13.80	100.00	41
3. Matric and above	..	8.65	3.11	54.64	24.75	8.85	100.00	26
4. Not Recorded	..	100.00	—	—	—	—	100.00	1
5. Total	..	37.20	8.16	13.40	15.59	25.65	100.00	170
13th Round								
1. Illiterate	..	40.73	1.82	2.43	5.78	49.24	100.00	149
2. Literate but below Matric	..	12.35	4.50	8.99	16.86	57.30	100.00	46
3. Matric and above	..	4.76	9.52	23.81	19.05	42.86	100.00	16
4. Total	..	31.96	3.04	5.65	9.13	50.22	100.00	211
18th Round								
1. Illiterate	..	56.38	16.39	12.94	3.65	10.64	100.00	53
2. Literate but below Secondary	..	23.33	21.36	23.87	24.25	7.19	100.00	38
3. Secondary	..	13.85	24.51	39.47	22.17	—	100.00	33
4. Rest	..	—	—	—	—	100.00	100.00	1
5. Total	..	32.71	18.31	22.81	18.50	7.67	100.00	145*
19th Round								
1. Illiterate	..	—	57.19	—	42.81	—	100.00	15
2. Literate but below primary	..	—	37.80	—	62.20	—	100.00	16
3. Primary but below Secondary	..	—	38.79	—	59.28	1.92	100.00	45
4. Secondary	..	—	22.69	—	74.41	2.90	100.00	46
5. Graduate and above	..	—	66.65	—	22.77	10.58	100.00	62
6. Total	..	—	47.95	—	46.86	5.19	100.00	184

\* The data for 20 unemployed females with various technical qualifications, recorded in the 18th Round, could not be aggregated for presentation in the table.

SOURCE : The National Sample Survey, Reports No. 34 (p. 139) ; 52 (p. 143) ; 63 (p. 131) ; 164 (Draft) (p.34) ; 181 (Draft) (p. 57).

TABLE 33

*The Percentage Distribution of Unemployed Persons of each Sex and Specified Educational Level by the Duration of their Unemployment, according to the 10th and the 11th & 12th Rounds of the N.S.S. in Rural India*

Educational Level	Duration of Unemployment					Total	Sample Persons
	Up to 3 months	3 to 6 months	6 months to 1 year	1 year & above	Not Recorded		
PERSONS							
10th Round							
1. Illiterate	54.23	6.59	2.89	24.62	11.67	100.00	254
2. Literate but below Matric	15.56	3.83	20.63	41.76	18.22	100.00	125
3. Matric and above	8.96	2.84	42.62	37.22	8.36	100.00	25
4. Total	40.88	5.60	10.25	30.05	13.22	100.00	404
11th and 12th Rounds							
1. Illiterate	69.80	1.13	1.36	3.04	24.67	100.00	3,522
2. Literate but below Matric	55.72	6.23	7.15	14.18	16.72	100.00	621
3. Matric and above	17.41	12.07	12.20	34.16	24.16	100.00	53
4. Not recorded	45.30	20.44	—	—	34.26	100.00	16
5. Total	65.31	2.55	2.90	6.28	22.96	100.00	4,212
MALES							
10th Round							
1. Illiterate	57.07	6.69	3.75	24.06	8.43	100.00	147
2. Literate but below Matric	15.75	3.88	20.89	41.03	18.45	100.00	123
3. Matric and above	8.96	2.84	42.62	37.22	8.36	100.00	25
4. Total	36.30	5.22	14.18	31.96	12.34	100.00	295
11th and 12th Rounds							
1. Illiterate	67.20	0.98	1.61	5.29	24.92	100.00	1,697
2. Literate but below Matric	54.82	6.15	7.45	14.42	17.16	100.00	579
3. Matric and above	16.50	7.13	13.31	36.69	26.37	100.00	48
4. Not recorded	48.27	12.93	—	—	38.80	100.00	8
5. Total	60.82	3.03	4.09	9.73	22.33	100.00	2,332
FEMALES							
10th Round							
1. Illiterate	51.11	6.47	1.96	25.23	15.23	100.00	107
2. Literate but below Matric	—	—	—	100.00	—	100.00	2
3. Matric and above	—	—	—	—	—	—	—
4. Total	50.57	6.40	1.94	26.02	15.07	100.00	109
11th and 12th Rounds							
1. Illiterate	72.21	1.26	1.14	0.96	24.43	100.00	1,825
2. Literate but below Matric	73.60	7.88	1.38	9.24	7.90	100.00	42
3. Matric and above	27.36	66.18	—	6.46	—	100.00	5
4. Not recorded	41.99	28.80	—	—	29.21	100.00	8
5. Total	71.93	1.85	1.14	1.20	23.88	100.00	1,880

SOURCE : The National Sample Survey, Reports 34 (p. 90) ; 52 (p. 82).

132. Admittedly, a question on the duration of unemployment is not easy to answer. Quite probably, nominal work in the past, such as would lead to a person's classification as employed during the reference week, would be overlooked by the respondents. Also, persons more willing to take up casual work would report shorter durations of unemployment than others seeking regular jobs. This last factor probably explains the fact that both in urban and rural India, the proportion of the unemployed reporting short-duration unemployment (up to 3 or 6 months) has generally been higher among the illiterates than among persons with higher educational attainments.

133. Except in the 19th Round, the proportion of urban unemployed without work for more than 6 or 12 months was higher among the "educated" (who had completed secondary education, i.e. were matriculates) than among other literates. When the graduates are shown separately from matriculates, the latter seem to be worse off than those who complete a degree. Thus not only is the incidence of unemployment relatively lower among the graduates than among the matriculates (as seen in Table 29), the waiting period or the duration of unemployment also appears to be lower for the former than for those who do not acquire a college degree.

134. The available data for males and females are also shown in Table 32. In view of the small number of unemployed females in each educational category, inferences based on comparisons by sex are likely to be tentative. Yet, on the whole, one does not notice any sharp difference in the broad characteristics of the distribution of male and female unemployed according to the duration of their unemployment.

135. The data on the duration of unemployment of the rural unemployed are available from the 10th and the 11th and 12th Rounds (Table 33). The number of literate or educated females in the samples was too small to permit any inference. For unemployed males, however, the association between literacy or education and the duration of unemployment was similar to that observed for the urban unemployed. The proportion reporting unemployment of short duration (up to 3 months) was higher among the illiterates than among the non-matriculate literates or matriculates. Also, the proportion reporting unemployment for more than 6 months was higher among the matriculates than among others. However, the observation based on the 10th Round that nearly one-fourth of the illiterates unemployed males were without work for more than one year seems to be difficult to believe. The decline in this proportion during the 11th and 12th Rounds was accompanied by a rise in the proportion of those for whom the data on duration of unemployment were not recorded. Presumably, the question on the duration of unemployment is more difficult to understand and answer in the rural setting than in the urban. It must be a matter of grave concern that between 20 and 40 per cent of the urban persons classified as unemployed in the various N.S.S. Rounds reported unemployment for more than one year. It is a long "waiting period" and policy programmes must endeavour to shorten it. Despite the non-comparability between the economic situation and the employment market prevailing in the United States, it might be useful to note here some data pertaining to U.S.A. The highest category in the classification of duration of unemployment in the U.S. is 27 weeks and over. The highest percentage of unemployed reporting such "long-term unemployment" (without work for 27 weeks and over) was 17.1 in 1961 and it has steadily come down to 5.5 in 1968. While the figures are not strictly comparable, a major part of the decline is believed to represent an actual decline in long-term unemployment. Further, only 10.8 per cent of such persons reporting long-term unemployment in 1968 had no previous work experience<sup>4</sup>.

136. The small proportion of unemployed persons with no prior work experience might be because of the American tradition of short-term vacation employment for the high school and college students. However, the availability of such jobs itself reflects the prevailing general shortage of labour. The Indian situation is entirely different. Yet an attempt needs to be made to provide some work experience at least as a part of the academic education in India.

#### *Training and Job Preferences of the Unemployed.*

137. In this connection it should be noted that almost 80 per cent of the urban unemployed surveyed by the 16th Round of the N.S.S. had not received any formal training that would equip them

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<sup>4</sup>U.S. Department of Labour, Manpower Report of the President, 1969 (pp. 42-43) ; Statistics on Manpower : A Supplement to the Manpower Report of the President (pp. 18-22) ; both published by the Government Printing Office, Washington (D.C.), 1969.

for specific vocations<sup>47</sup>. Moreover, to the 17th Round of the NSS, nearly 31 per cent of the urban unemployed who were new entrants were looking for "miscellaneous clerical" work, another 12 per cent sought "unskilled office work" and 8 per cent wanted to work as teachers<sup>48</sup>. One might presume that those looking for teaching were only temporarily unemployed, i.e. faced 'frictional' unemployment. The others could have partly been diverted to other vocations. The acute shortage of skilled craftsmen such as carpenters, masons, plumbers, machanics, and of stenographers in our urban centres is well-known. These vocations command a premium in terms of wage rates also. The co-existence of shortage of such personnel with surplus of persons educated upto matriculation or more arises partly because of the widespread preference for white-collar work. Therefore the problem of manpower planning in India encompasses the task of modifying the outlook of the young students (and to some extent, of their parents) about the preferred vocations. Yet, if a significant proportion of students passing matriculation each year is diverted for training in the crafts, it will almost certainly lead to a glut of craftsmen, unless proper programmes are devised simultaneously to increase the demand for their skills in activities such as public work and housing.

138. The preceding discussion of mainly the NSS data was drawn attention to some of the variables much as sex, age, educational attainment, region, and duration of unemployment of the unemployed. Some of the points have a direct relevance to policy programmes that need to be undertaken. On other issues more information is required. For example, a more intensive analysis of the characteristics of persons reporting long-duration unemployment and perhaps some supplementary questions to ascertain the underlying circumstances would help to understand the situation and devise appropriate policy measures. The scope for necessary cross-tabulations is restricted by the usually small number of unemployed in the sample. However, the largest number of unemployed observed in the 17th Round in Urban areas (12, 112) was large enough to permit quite elaborate tabulation. With a more imaginative tabulation programme, the NSS data can bring to light a number of additional facts with direct policy implications. On some issues, a revision of the schedules in use might also be advisable. One hopes that the widespread concern in the country about the problem of unemployment will stimulate a thorough review of the past procedure and tabulation programme and enhance thier usefulness. A similar review could usefully be made of the rule of Employment Exchanges. However, let us now review the statistics available from the operations of the Employment Exchanges.

## VI

### EMPLOYMENT EXCHANGE STATISTICS

139. In section IV above, a reference was made to the availability of information on the number of persons on the Live Register of Employment Exchanges and the limitations of these data for estimating the volume of urban unemployment. A brief review of the statistics indicating the nature and scale of operations of employment exchanges is presented below :—

#### *Summary Figures on Registrations and Placements.*

140. Table 34 shows the summary figures on the activities of the Employment Exchanges during the period 1951—68. In view of the progressive increase in the number of Exchanges, particularly during 1956—66, one cannot derive a time trend from these statistics without substantial adjustments. Broadly speaking, it is possible to distinguish between Exchanges that existed at given two or more points in time and the new Exchanges<sup>49</sup>. When new Exchanges are opened, some cards from old Exchanges are transferred to the former. A study under taken for the period April 1, 1956 to March 31, 1960, when the number of Exchanges increased from 136 to 270, indicated that while the total figure of persons on the Live Register increased during the period by 682,887, about 31.5 per cent of the new registrants (214,657 persons) has been registered with Exchanges opened during the period.<sup>50</sup> Such an analysis is not readily available for subsequent years.

<sup>47</sup>The NSS, Report No. 103, Tables with Notes on Urban Labour Force, Sixteenth Round : July, 1960 June, 1961, Delhi, 1966, pp. 37—39.

<sup>48</sup>The 17th Round Report of the NSS is the last to give such classification. The number of unemployed new entrants in the sample was 5,524. See : NSS, Report No. 127, Tables with Notes on Urban Labour Force, Seventeenth Round : September, 1961—July, 1962, Delhi, 1969, pp. 55—60. The 16th Round of the NSS also reported almost identical preferences for jobs. See : The NSS, Report No. 103, op. cit., pp. 40—48.

<sup>49</sup>It is not possible, of course, to estimate the number of persons resident in the jurisdiction of new Exchanges who would have registered at the old Exchanges.

<sup>50</sup>Planning Commission, Labour and Employment Division, Employment Trends and Prospects: A State-wise Analysis, November, 1960 ; Cyclostyled, pp. 68-69

TABLE 34

*Main Statistics on the activities of the Employment Exchanges during 1951—1968*

Year	Number of exchanges at the end of the year	Average monthly No. of employers using the exchanges	Number of vacancies notified during the year	Number of Registrations during the year	Number of placements affected during the year	Number of applicants on Live Register at the end of the year
1951*	126	6,364	4,86,534	13,75,351	4,16,858	3,28,719
1952*	131	6,023	4,29,551	14,76,699	3,57,828	4,37,571
1953	126	4,320	2,56,703	14,08,800	1,85,443	5,22,360
1954	128	4,360	2,39,875	14,65,497	1,62,451	6,09,780
1955	136	4,880	2,80,523	15,84,024	1,69,735	6,91,958
1956	143	5,346	2,96,618	16,69,895	1,89,855	7,58,503
1957	181	5,632	2,97,188	17,74,688	1,92,831	9,22,099
1958	212	6,485	3,64,884	22,03,888	2,33,320	11,83,299
1959	244	7,476	4,24,393	24,71,596	2,71,131	14,20,901
1960	296	8,807	5,20,330	27,32,548	3,05,553	16,06,242
1961	325	10,397	7,08,379	32,30,314	4,04,077	18,32,703
1962	342	11,472	7,90,445	38,44,902	4,58,085	23,79,530
1963	353	12,475	9,08,980	41,51,781	5,36,277	25,18,463
1964	365	13,742	9,16,572	38,31,984	5,44,818	24,92,874
1965	376	13,938	9,46,082	39,57,605	5,70,191	25,85,473
1966	396	12,972	8,52,467	38,71,162	5,07,342	26,22,460
1967	399	11,420	6,99,039	39,11,748	4,30,588	27,40,405
1968	405	11,890	7,14,006	40,39,516	4,24,227	30,11,642

\*The figures include those for the 'mobile sections' of Employment Exchanges which were discontinued subsequently.

141. As the procedures of Employment Exchanges become known, the proportion of job-seekers who renew their registration, if necessary, at the end of the prescribed period, naturally tends to increase. The proportion of registrations which were allowed to lapse at the end of their prescribed initial period of validity (generally three months) is reported to have declined from an average of 40.5 per cent during January—December, 1953 to 25.3 per cent during January—December, 1959.<sup>61, 62</sup> Presumably, the downward trend has continued during the 1960's as well and has contributed to the rise in the number of persons on the Live Register at the end of each year

<sup>61</sup>P. Bahadur, "Urban Unemployment. An Estimate Based on Employment Exchange Statistics" in V.K.R. V. Rao (Ed.) *Employment and Unemployment*, Allied Publishers, Bombay, 1968, p. 64.

<sup>62</sup>The reported lapse ratios refer only to the renewals at the end of the three months after initial registration. The percentage of registrations which lapse (i.e. are not renewed) must be rising sharply with an increase in the time period elapsing after registration. At least some of such lapse cases would pertain to persons who might have managed to find a gainful activity without the assistance of Employment Exchanges and should, therefore, cancel their registrations.

142. In recent years, the renewal period has been extended from three to six months in some of the Employment Exchanges in Bihar (Maraphari Exchange—effective April 10, 1961), Delhi (all Exchanges—effective June 1, 1968), Kerala (Trivandrum and Cannanore Exchanges—effective March 1, 1968) and Orissa (Koraput Exchange and its sub-offices—effective November 3, 1967; Phulbani, Bolangir and Kalhandi Exchanges—effective January 1, 1968; Baripada Exchange and its sub-offices—effective January 16, 1968). In Delhi, since June 1, 1968, the renewal period for unskilled applicants is one year. In the Punjab, effective August 12, 1967, the renewal period for only the ex-Servicemen has been extended to six months. The main reason underlying such elongation of the renewal period has apparently been the observed long interval between the registration of job-seekers and the first call to them for possible placement. In Orissa, the difficulties of communication were also a consideration. A lengthening of the renewal period naturally increases the number of persons on the Live Register and introduces an element of non-comparability in the data for different States. Fortunately, the disparities in the renewal period have so far not been very large or widespread.<sup>68</sup> The interpretation of statistics on the number of persons on the Live Register is subject to these limitations.

The following highlights of Table 34, should be noted.

- (a) The number of employers using the employment exchanges increased rather rapidly during 1959—63 after the Employment Exchanges (Compulsory Notification of Vacancies) Act, 1959, came into force in 1960.
- (b) The number of vacancies notified to the exchanges also increased rapidly over this period ; it reached the peak figure of 9.46 lakhs during 1965 and declined thereafter. On the other hand, the annual figure of registrations reached its peak during 1963 and has been below that level thereafter.
- (c) The gap between the number of placements effected during the year and the vacancies notified appears to have increased after 1952. The percentage of placements to registrations during the year has declined after 1952 and has been between 10 and 15 per cent. If placements were shown as percentage of all job-seekers, i.e., persons on the Live Register plus registrations during the year, the role of Employment Exchanges in finding jobs for the registrants would seem to be much less significant.
- (d) Despite the large gap between placements and registrations each year, the number of job-seekers on the Live Register has not increased proportionately because of non-renewal (lapse) and/or cancellation of registration by persons who find some gainful activity through their own efforts or who despair of any assistance by the Exchanges. Yet, the number of applicants on the Live Register has progressively increased. While this number was generally steady during the year 1962—66, it has increased rather sharply during 1967—69. At the end of December, 1969, 34.24 lakh persons were on the Live Register of Employment Exchanges.

#### *Placements According to Employing Agency.*

143. Several factors are believed to be responsible for the relatively small number of placements by the employment exchanges. Some of these pertain to the attitude of employers while others relate to the characteristics of persons registered with Exchanges and the procedures of submission of their names to the potential employers. Table 35 shows the distribution of placements by Employment Exchanges according to the employing agency. It is evident that the main users of Employment Exchanges tend to be the Central and State Governments and the quasi-governmental and local government institutions. These agencies attempt to abide by the provisions of the law to a much greater extent than the private sector establishments. Not infrequently, however, persons informally selected for appointment to particular positions are advised to register with an Employment Exchange to fulfil the formality and are then recruited. Also, along with the candidates referred by an Employment Exchange, the employer is free to consider other candidates. It is not possible to verify the extent to which such practices are operative. On the other hand, the Exchanges are reported to be selecting the candidates primarily on the basis of their seniority in registration. While an impartial basis of selection of candidates to be referred for positions is obviously desirable, more attention can perhaps be devoted to the aptitudes and skills of the registrants.

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<sup>68</sup> The above information has been supplied by the D.G.E.T.



TABLE 35

*The Distribution of Placements by Employment Exchanges According to (a) Employers and (b) Some Characteristics of the Employed, 1949—1966.*

(Figures are in '000)

Years	(a) Employer					(b) Some Characteristics of the Employed					
	All Place-ments	Central Go-vernment (Includ-ing Railways)	State Go-vernment	Quasi-Go-vernment & Local Government Bodies	Other Estab-lishment	Ex-service-men	Displaced persons	Women	Sched-uled Castes	Schedu-l-ed Tribes	
1949	.. 256.8	65.8	79.6	111.3	..	21.9	43.7	11.7	N.A.	N.A.	
1950	.. 331.2	64.3	70.6	196.3	..	17.5	29.7	24.1	45.1	N.A.	
1951	.. 416.9	93.7	80.7	242.4	..	25.7	27.4	28.3	56.7	N.A.	
1952	.. 357.8	87.3	66.8	203.7	..	14.5	17.1	26.8	49.5	6.6	
1953	.. 185.4	69.9	56.1	59.5	..	12.8	11.2	11.8	28.0	3.2	
1954	.. 162.5	63.2	55.6	43.7	..	13.7	10.9	8.6	24.6	3.3	
1955	.. 169.7	67.3	62.4	40.0	..	15.0	13.3	8.4	27.0	3.0	
1956	.. 189.9	66.0	75.7	43.1	..	31.5	9.8	9.8	28.1	4.8	
1957	.. 192.8	60.2	80.9	23.9	27.8	10.9	7.5	11.3	27.4	5.4	
1958	.. 233.3	59.5	115.2	31.0	27.7	9.5	6.7	16.1	34.6	5.5	
1959	.. 271.1	59.0	147.5	38.3	26.4	10.5	5.4	17.6	39.0	4.9	
1960	.. 305.6	67.7	168.5	36.2	33.1	11.1	3.5	20.9	42.1	5.1	
1961	.. 404.1	90.4	205.8	58.1	49.8	9.9	3.9	29.6	50.0	6.8	
1962	.. 458.1	95.5	229.0	77.7	55.9	9.1	3.7	35.7	54.1	10.0	
1963	.. 536.3	155.1	232.5	78.8	69.9	8.9	3.4	36.5	61.0	12.6	
1964	.. 544.8	125.9	243.4	93.9	80.0	8.9	2.8	47.8	60.9	15.4	
1965	.. 570.2	141.0	254.3	98.6	76.3	13.6	3.8*	49.0	58.7	21.6	
1966	.. 507.3	112.5	219.0	107.3	68.5	12.0	0.9*	50.2	56.5	15.8	

\*The displaced persons provided with employment during 1965 and 1966 include 1.2 and 0.9 thousand immigrants from East Pakistan.

*Note:* The data on the characteristics of the employed do not cover all persons who obtained jobs through the employment exchanges.

144. It should be noted that 63.9 per cent of the persons on the Live Register at the end of September, 1967 had been on the Register for less than one year and another 20.9 per cent for more than one but less than two years. Others had been on the Register for more than two years. If seniority in registration were the sole criterion for selecting candidates for referrals, one would expect a higher proportion of applicants to be on the Live Register for more than one year. However, the apparent inconsistency arises from the high incidence of non-renewals and/or cancellations.

145. Some information on the characteristics of persons who obtained jobs through employment exchanges is also presented in Table 35. It is evident that during 1949-50 to 1953, the Employment Exchanges sought to fulfil their intended objective of finding jobs for persons released from the armed services and the displaced persons from Pakistan. The figures for some of the recent years indicate the effect of the preferences and reservation of posts for the Scheduled Castes for posts in the public services.

#### *An Occupational Distribution of Job-Seekers*

146. Table 36 shows the characteristics of persons on the Live Register of exchanges in terms of the occupational group to which the registrants are assigned by the employment exchange officer on the basis of their qualifications and work experience. The data for the period 1951-59 indicate the interesting fact that between 48 and 53 per cent of those registered with the exchanges were classified as eligible for only unskilled jobs and another 25 to 29 per cent wanted or were eligible for only the clerical jobs. The figures for the period 1960-68 follow the National Classification of occupations and distinguish persons with no work experience or training from others. According to these data, more than two-thirds of the registrants with the employment exchanges had no training or prior work experience. Among others, the two major occupations groups appear to be "craftsmen and production process workers" and the "professional technical and related workers". The latter group has gained in importance steadily since 1964. The proportion of job-seekers registered for clerical and sales occupations has fluctuated significantly between 5.8 and 2.8 per cent over the nine year period. While the practices regarding classification can influence these figures to a considerable extent, the increase in the proportion of persons seeking professional and technical occupations is presumably due to the registration of an increasing number of engineers and technicians. Even if they do not have prior work experience, they can be said to be trained for specific occupations. To evaluate this point we must look at the distribution of job-seekers according to their educational level.

TABLE 36

*The Number of Applicants on Live Register of Employment Exchanges at the End of Each Year during 1951-59 According to Broad Occupation Groups*

Occupational Group								
At the end of	All applicants	Industrial Supervisory	Skilled and Semi-skilled	Clerical	Educational	Domestic Service	Unskilled	Others
(A) Numbers (in Thousands)								
1951	322	3	38	85	5	12	162	23
1952	438	4	47	116	7	14	22	25
1953	522	5	53	105	11	17	249	37
1954	610	5	55	173	18	21	299	38
1955	692	4	57	196	20	23	354	37
1956	759	5	60	216	25	26	388	39
1957	922	6	72	268	40	32	461	44
1958	1,183	9	89	308	56	44	620	57
1959	1,420	14	105	356	69	53	754	70
(B) Percentage Distribution								
1951	100.0	1.05	11.57	25.88	1.47	3.56	49.41	7.06
1952	100.0	0.99	10.68	26.50	1.59	3.18	51.30	5.76
1953	100.0	1.01	10.05	28.73	2.18	3.28	47.67	7.08
1954	100.0	0.86	9.06	28.39	2.91	3.48	49.06	6.24
1955	100.0	0.64	8.26	28.31	2.96	3.30	51.20	5.33
1956	100.0	0.63	7.91	28.41	3.35	3.39	51.21	5.10
1957	100.0	0.64	7.78	29.04	4.37	3.47	49.95	4.77
1958	100.0	0.75	7.49	26.65	4.73	3.70	52.43	4.64
1959	100.0	0.97	7.41	25.07	4.85	3.74	53.06	4.90

TABLE 36 (concl'd.)

*The Number of Applicants on Live Register of Employment Exchanges at the End of Each Year during 1960—68 According to Broad Occupation Groups*

At the end of	All applicants	Professional Technical Workers	Administrative Executive and Managerial Workers	Clerical Sales and Related Workers	Agricultural dairy and related workers	Miners, Quarrymen and related workers	Workers in transport and communication occupation	Craftsmen and production process workers	Service workers	Labourers with experience, n.e.c.	Persons without Training or work Experience
<b>(A) Numbers (in Thousands)</b>											
1960	1,606	70	3	93	9	3	36	113	70	91	1,118
1961	1,833	80	4	88	10	6	35	134	73	108	1,295
1962	2,380	113	4	99	13	6	52	206	94	153	1,638
1963	2,518	115	4	74	10	6	49	200	85	122	1,853
1964	2,493	109	3	69	10	5	47	165	85	117	1,880
1965	2,585	123	3	77	10	5	56	185	87	105	1,935
1966	2,619	153	4	94	10	3	62	195	99	103	1,898
1967	2,740	193	4	114	10	3	73	211	109	110	1,914
1968	3,012	252	6	132	12	6	81	246	118	106	2,052
<b>(B) Percentage Distribution</b>											
1960	100.0	4.38	0.20	5.78	0.54	0.19	2.24	7.02	4.38	5.68	69.59
1961	100.0	4.38	0.20	4.85	0.56	0.31	1.90	7.30	3.97	5.88	70.65
1962	100.0	4.73	0.18	4.18	0.54	0.27	2.18	8.67	3.95	6.44	68.86
1963	100.0	4.57	0.14	2.94	0.40	0.25	1.95	7.95	3.36	4.85	73.58
1964	100.0*	4.36	0.13	2.76	0.39	0.21	1.89	6.61	3.42	4.69	75.54
1965	100.0	4.74	0.12	2.96	0.37	0.21	2.16	7.15	3.38	4.06	74.85
1966	100.0	5.84	0.17	3.60	0.37	0.09	2.37	7.45	3.80	3.94	72.37
1967	100.0	7.05	0.16	4.18	0.36	0.10	2.67	7.69	3.96	4.00	69.83
1968	100.0	8.38	0.20	4.37	0.40	0.22	2.69	8.16	3.92	3.51	68.15

\*Excludes 3,772 applicants who were on the Live Register of Employment Exchange in Panjim (Goa) for which occupational break-up is not available.

### *The Educational Attainment of Job-Seekers*

147.1 Table 37 below shows the number of persons with different educational qualifications on the live Register of Employment Exchanges at the end of successive years during 1957—1969. In Table 38, the same figures have been presented as an index number series with the figures for 1963 as the base. (The year 1963 has been chosen as the base because in the subsequent few years, the number of Employment Exchanges has remained relatively steady.) It is evident that the substantial increase in the number of persons receiving degrees or diplomas from our educational institutions has been accompanied by an increase in the number of matriculates, graduates and post-graduates registered on the employment exchanges. Table 38 shows the interesting fact that between 1963—1966 the total number of persons on the Live Register increased very little—by no more than 5 per cent; while the number of “educated” persons on the Live Register increased by 24 per cent; of graduates by 38 per cent and of intermediates by 84 per cent. The increase in the number of intermediates has been rapid because in areas where a three-year degree course has been adopted, the students completing higher secondary school are classified as senior to matriculates or those who have obtained only a secondary school leaving certificate (S.S.L.C.). As a result, the number of matriculates on the Live Register has increased less than the number of graduates and post-graduates.

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TABLE 37

*The Number of Educated Persons (Matriculates and Higher Educated) on the Live Register of Employment Exchanges in India at the end of Each Year during 1957—69.*

At the end of	No. of Employment Exchanges	All persons on the Live Register of Exchanges	All Educated Matriculates	Intermediates	Graduates	Post-graduates
PERSONS						
1957	181	922,099	307,558	236,509	38,762	32,287
1958	212	1,83,299	364,392	283,268	44,575	36,549
1959	244	1,420,901	433,111	344,329	49,141	39,641
1960	296	1,636,242	507,220	399,880	60,756	46,584
1961	325	1,832,703	590,230	463,633	70,811	55,786
1962	342	2,379,530	708,356	553,618	90,954	63,784
1963	353	2,518,463	739,066	559,967	111,269	67,830
1964	365	2,492,874	804,858	584,571	147,961	63,752
1965	376	2,585,473	841,833	580,265	175,510	73,267
1966	396	2,622,460	917,487	619,480	204,426	80,870
1967	399	2,740,405	1,087,371	714,148	251,744	106,101
1968	405	3,011,642	1,309,340	809,631	324,319	157,221
1969	416	3,423,885	1,526,250	909,686	401,326*	189,512
MALES						
1960	296	N.A.	452,783	353,560	57,430	41,793
1961	325	N.A.	525,071	408,604	66,299	50,168
1962	342	2,199,576	627,342	486,842	84,073	56,427
1963	353	2,320,474	648,947	485,452	103,023	60,472
1964	365	2,272,853	701,553	500,701	137,591	56,112
1965	376	2,354,146	731,380	493,764	162,240	64,878
1966	396	2,361,837	796,320	527,626	187,525	71,057
1967	399	2,434,537	929,749	600,023	227,695	90,320
1968	405	2,653,652	1,114,527	678,134	288,599	133,336
FEMALES						
1960	296	N.A.	54,437	46,320	3,326	4,791
1961	325	N.A.	65,159	55,029	4,512	5,618
1962	342	179,954	81,014	65,776	6,881	7,357
1963	353	197,989	90,119	74,515	8,246	7,358
1964	365	220,021	103,305	83,870	10,370	7,640
1965	376	231,327	110,453	86,501	13,270	6,389
1966	396	260,623	121,167	91,854	16,901	9,813
1967	399	305,898	157,622	114,125	24,049	15,781
1968	405	357,990	194,813	131,497	35,720	23,885

TABLE 38

*Indices of the Number of Educated Persons (Matriculates and Higher Educated) on the Live Register of Employment Exchanges at the end of Each Year during 1960—68*

Year ending	Number of Exchanges	All persons on the Live Register	All Educated	Matriculates	Intermediates	Graduates and Post-graduates	
PERSONS							
1960	..	83.8	63.8	68.6	71.4	54.6	68.7
1961	..	92.1	72.8	79.9	82.8	63.6	82.2
1962	..	96.9	94.5	95.8	98.9	81.7	94.0
1963	..	100.0	100.0	100.0	100.0	100.0	100.0
1964	..	103.4	99.0	108.9	104.4	133.0	106.6
1965	..	106.5	102.7	113.9	103.6	157.7	126.9
1966	..	112.2	104.1	124.1	110.6	183.7	138.0
1967	..	113.0	108.8	147.1	127.5	226.2	179.1
1968	..	114.7	119.6	177.2	144.6	291.5	231.8
1969	..	117.8	136.0	206.5	162.5	360.7	317.3
MALES							
1960	..	83.8	N.A.	69.8	72.8	55.7	69.1
1961	..	92.1	N.A.	80.9	84.2	64.4	83.0
1962	..	96.9	94.8	96.7	100.3	81.6	93.3
1963	..	100.0	100.0	100.0	100.0	100.0	100.0
1964	..	103.4	97.9	108.1	103.1	133.6	104.6
1965	..	106.5	101.5	112.7	101.7	157.5	124.6
1966	..	112.2	101.8	122.7	108.7	182.0	134.2
1967	..	113.0	104.9	143.3	123.6	221.0	168.7
1968	..	114.7	114.4	171.7	139.7	280.1	220.5
FEMALES							
1960	..	83.8	N.A.	60.4	62.2	40.3	65.1
1961	..	92.1	N.A.	72.3	73.8	54.7	76.4
1962	..	96.9	90.9	89.9	89.6	83.4	100.0
1963	..	100.0	100.0	100.0	100.0	100.0	100.0
1964	..	103.4	111.1	114.6	112.6	125.8	123.2
1965	..	106.5	116.8	122.6	116.1	160.9	118.0
1966	..	112.2	131.6	134.5	123.3	205.0	168.7
1967	..	113.0	154.5	174.9	153.2	291.6	264.3
1968	..	114.7	180.8	216.2	176.5	433.2	324.6

148. Taking matriculates and intermediates as one group, the number of graduates and post-graduates on the Live Register has increased faster. Yet, at the end of 1969, their aggregate number was much smaller (215 thousand) than that of matriculates and intermediates (1.31 million). Furthermore, one observes the interesting fact that after 1963, the number of females on the Live Register has increased much faster than that of males. In fact, among male registrants there was hardly any increase during 1963—1966 and over the five-year period 1963—68, the increase was only 14 per cent. The number of female registrants, on the other hand, went up by 81 per cent during 1963—68. In each category of the educated—matriculates, intermediates or graduates or graduates and post-graduates—the increase among female registrants has been much greater than among males. One wonders how far this fact represents a rise in the labour force participation by the educated women in urban India. Unfortunately, the NSS estimates of female participation rates in urban India are not available for the years 1966-67 and the participation rates for the matriculates or the graduate women in urban India based on 16th, 18th and 21st Rounds indicate a rather conflicting trend of a decline in participation by matriculate females and rather erratic fluctuations in the rates for graduates or higher-educated women. The fact that the NSS estimates of participation rates for educated women are based on a small number of women in the sample also restricts the validity of any inferences. Nevertheless, it is obvious that in future the labour force participation by the educated urban women will need to be observed and studied very carefully.

149. Some reference may be made here to the distribution of graduates and post-graduates on the Live Register of Exchanges according to the field of study. Unfortunately, these data are not available separately for males and females. However, in Table 39 we have summarized the available information for the period June, 1966—December, 1969. Interestingly, more than 50 per cent of the graduates and a majority of the post-graduates on the Live Register happened to be students of liberal arts. The worsening of the employment situation for the Engineers was reflected in the table in the form of increasing numbers as well as proportion of engineering graduates.

TABLE 39  
*Graduates and post-graduates on the Live Register of Employment Exchanges during June, 1966—December, 1969, According to Their Field of Study*

	June, 1966	June, 1967	December, 1967	June, 1968	December, 1969
(a) Numbers in Thousands					
Graduates	78.8	92.8	106.1	121.6	189.5
Arts	39.5	50.2	47.3	52.3	79.9
Science	20.9	22.3	23.1	27.6	46.8
Commerce	13.3	13.0	17.1	17.2	26.3
Engineering	3.6	3.6	6.6	7.4	12.8
Medical	0.4	0.5	1.1	1.1	1.5
Others	1.1	1.2	10.9	15.9	22.2
Post-graduates	13.4	17.6	15.4	16.2	25.8
Arts	7.8	10.2	7.8	11.4	12.1
Science	2.8	2.9	2.5	2.4	5.3
Commerce	2.8	0.9	1.2	1.2	2.1
Engineering		1.3	0.4	0.4	0.3
Medical		0.1	0.1	0.1	0.1
Others		2.2	3.4	0.6	5.9
All Graduates and Post-graduates	192.2	110.4	121.5	137.8	215.3

TABLE 39—(concl'd)

	June, 1966	June, 1967	December, 1967	June, 1968	December, 1969	Percent- age Increase, June, '66— June, 1968	Percent- age Increase Dec., '67— Dec., '69
<b>(b) Percentage Distribution and Increase</b>							
Graduates ..	100.00	100.00	100.00	99.92	100.00	54.31	78.61
Arts ..	50.12	54.09	44.58	43.01	42.16	32.41	68.92
Science ..	26.52	24.03	21.77	22.70	24.70	32.06	102.60
Commerce ..	16.88	16.16	16.12	14.14	13.88	29.32	53.80
Engineering ..	4.57	3.88	6.22	16.09	6.75	105.56	93.94
Medical ..	0.51	0.55	1.04	0.90	0.79	175.00	36.36
Others ..	1.40	1.29	10.27	13.08	11.72	1,345.45	103.67
Post-graduates ..	100.00	100.00	100.00	100.00	100.00	20.90	67.53
Arts ..	58.20	57.95	50.65	70.81	46.90	46.15	55.13
Science ..	20.90	16.48	16.23	14.91	20.54	-14.29	112.00
Commerce } ..	20.90	5.11	7.79	7.45	18.14	-17.86	75.00
Engineering } ..		7.39	2.60	2.48	1.16		-25.00
Medical } ..		0.57	0.65	0.62	0.39		0.0
Others } ..		12.50	22.08	3.73	22.87		73.53

Including Veterinary.

Sources : D.G.E.T., *Employment Review* for 1966-67 (p. 26) and 1967-68 (p. 35) ;  
National Commission on Labour, *Report of the Study Group on Employment and Training*, 1969 (p. 126);  
and a personal communication from the D.G.E.T.

### *The Regional Location of Persons on the Live Register*

150. Table 40, 40A and 40B show the change during the five years after December 31, 1963, in the number of persons, males and females on the Live Register in different States and Union Territories of India. The tables show also the educational level of the registrants.

151. The data suggest large inter-State differences in the trend in the number of job-seekers on the Live Register. Considering all job-seekers together, there was a surprising decline in the number on the Live Register in Uttar Pradesh and West Bengal. The decline occurred (among males only) despite a rise in the number of Exchanges. Among other States, the increase in the number of job-seekers on the Register of the Exchanges in Jammu and Kashmir, Orissa and Assam was below and in Maharashtra (20.1 per cent) only slightly above that all-India average of 19.6 per cent. Among the States, the highest increase was observed in Mysore (79.3 per cent) despite a virtual constancy in the number of Exchanges. In the Union Territories of Himachal Pradesh, Manipur, Pondicherry and Tripura, the increase was quite substantial in percentage terms but relatively small in absolute numbers.

152. The trend in the number of matriculates and higher-educated on the Live Register was somewhat different from that in the number of all job-seekers. Even in U.P. and West Bengal, the number of such "educated" registrants increased by 8.5 and 38.8 per cent, respectively, indicating that the decline in the number of all job-seekers on the Register was concentrated among the non-matriculates. In fact, in all States, except Manipur, the number of "educated" registrants increased faster than that of all job-seekers. The increase in U.P. was the lowest among the States, with the highest increase reported to be in Madras (166 per cent). The increase in Jammu and Kashmir, Delhi, Assam, Maharashtra and Kerala was below the all-India average (77.2 per cent).

TABLE 40

*The Change in the Number of Exchanges and Persons on the Live Register in Different States of India during 1963—68, According to The Educational Level of Applicants*

State/Union Territory	Year	Exchanges	All Job-seekers	Matriculates & Higher Educated	Matriculates	Inter-mediate	Graduates & Post-graduates
Andhra Pradesh	1963	23	133,438	38,875	30,202	5,213	3,460
	1968	24	174,912	77,041	47,392	19,864	9,785
	% Change	4.3	31.0	98.2	56.9	281.0	182.8
Assam	1963	21	48,088	10,876	8,613	1,627	636
	1968	24	53,667	17,530	11,266	3,999	2,265
	% Change	14.3	11.6	61.2	30.8	145.8	256.1
Bihar	1963	22	178,900	45,670	32,118	6,597	6,955
	1968	23	267,010	105,924	57,877	24,032	24,015
	% Change	4.5	49.2	131.9	80.2	264.3	245.3
Gujarat	1963	18	74,862	25,608	21,949	1,436	2,223
	1968	20	121,132	57,275	44,924	3,714	8,637
	% Change	11.1	61.8	123.7	104.7	158.6	288.5
Jammu and Kashmir	1963	2	6,269	1,042	787	127	128
	1968	8	6,586	1,820	1,218	320	282
	% Change	300	5.1	24.7	54.8	152.0	122.5
Kerala	1963	9	128,544	68,107	63,959	1,863	2,285
	1968	10	199,006	114,971	102,488	3,895	8,588
	% Change	11.1	54.8	68.8	60.2	109.1	275.8
Madhya Pradesh	1963	43	146,860	35,420	18,784	13,287	3,349
	1968	49	181,154	86,225	15,587	60,298	10,340
	% Change	13.9	23.4	143.4	—17.0	353.8	208.7
Madras	1963	16	193,401	42,836	38,514	2,364	1,958
	1968	18	276,407	113,820	95,020	9,822	8,978
	% Change	12.5	42.9	165.7	146.7	315.5	358.5
Maharashtra	1963	28	245,299	65,838	57,070	3,789	4,979
	1968	29	294,717	109,753	87,688	12,000	10,065
	% Change	3.6	20.1	66.7	53.6	216.7	102.1
Mysore	1963	20	109,704	46,594	40,985	2,248	3,361
	1968	21	196,686	94,242	60,290	25,623	8,329
	% Change	5	79.3	100.7	47.1	1,039.8	147.8
Orissa	1963	13	82,640	12,828	10,600	975	1,253
	1968	15	91,090	26,935	20,200	2,501	4,234
	% Change	15.4	10.2	110.0	90.6	156.5	237.9



TABLE 40 (concl'd)

State/Union Territory	Year Change	Exchange	All Job- seekers	Matricu- lates and Higher Educated	Matricu- lates	Inter- mediates	Graduates and Post- graduates
Punjab	.. 1963	31	83,071	31,536	35,724	2,472	2,340
	1968*	32	129,885	61,850	39,659	11,005	11,186
	% Change	3.2	56.3	96.1	45.8	216.9	378.0
Rajasthan	.. 1963	18	52,956	25,482	20,083	3,677	1,722
	1968	19	88,706	48,549	26,710	15,264	6,575
	% Change	5.5	67.5	90.5	33.0	315.1	281.8
Uttar Pradesh	.. 1963	53	417,712	117,586	79,474	26,999	11,113
	1968	59	293,531	127,566	71,021	39,119	17,426
	% Change	11.3	— 29.7	8.5	—10.6	44.9	56.6
West Bengal	.. 1963	25	510,538	122,097	74,049	33,418	14,630
	1968	29	434,423	169,414	73,894	67,606	27,914
	% Change	16.0	—14.9	38.8	—0.2	102.3	90.8
Delhi	.. 1963	12	86,872	43,521	32,405	3,552	7,064
	1968	11	112,894	66,552	31,155	21,011	14,386
	% Change	450.0	30.0	52.9	—5.3	491.5	103.7
Himachal Pradesh	.. 1963	6	6,580	1,606	1,462	85	59
	1968	10	42,771	12,033	9,448	1,666	919
	% Change	66.3	550.0	649.3	546.2	1,860.0	1,457.6
Manipur	.. 1963	1	5,243	1,461	975	349	137
	1968	1	12,727	2,837	1,636	814	387
	% Change	00.0	142.7	94.2	67.8	133.2	182.5
Pondicherry	.. 1963	1	1,855	277	231	26	20
	1968	1	8,561	2,350	1,998	168	184
	% Change	..	354.2	748.4	765.0	546.2	820.0
Tripura	.. 1963	1	5,633	1,806	1,483	165	158
	1968	1	18,555	9,973	7,888	1,420	665
	% Change	..	229.4	452.2	431.9	760.6	320.9
Goa	.. 1965	1	4,545	834	710	34	90
	1968	1	7,222	2,680	2,272	178	230
	% Change	..	58.9	778.7	220.0	576.5	155.5

\*Figures include the data for Chandigarh and Haryana.

NOTES : (1) The data on Exchanges and Persons on the Live Register in 1963 and 1968 relate to the situation at the end of December of the relevant year.

(2) The figures without any prefixed sign, shown in rows indicating percentage change in the number of registrants during 1963—68, denote increases. Figures indicating decreases bear the minus sign.

TABLE 40-A

*The Change in the Number of Exchanges and Males on the Lived Register in Different States of India during 1963—68 According to the Educational Level of Applicants*

State/Union Territory ]	Year Change	Ex-change	All Job-seekers	Matricu-lates & Higher Educated	Matricu-lates	Inter-mediates	Graduates & Post-graduates
Andhra Pradesh ..	1963	23	124,256	4,36,692	28,547	4,959	3,186
	1968	24	158,053	71,184	44,289	18,115	8,780
	% Change	4.3	27.2	94.0	55.1	265.3	175.6
Assam ..	1963	21	46,819	9,855	7,807	1,435	613
	1968	24	51,300	15,557	9,982	3,532	2,043
	% Change	14.3	9.6	57.9	27.9	146.1	233.3
Bihar ..	1963	22	172,475	44,539	31,261	6,453	6,825
	1968	23	259,317	103,951	56,657	23,733	23,561
	% Change	4.5	50.3	133.4	81.2	267.8	245.2
Gujarat ..	1963	18	67,881	23,095	19,965	1,291	839
	1968	20	104,201	49,673	39,197	3,240	7,236
	% Change	11.1	53.5	115.1	96.3	150.9	293.5
Jammu and Kashmir ..	1963	2	6,134	1,038	757	126	125
	1968	8	6,442	1,719	1,181	309	229
	% Change	300.0	5.0	70.5	56.0	145.2	83.2
Kerala ..	1963	9	90,665	42,729	39,495	1,573	1,659
	1968	10	131,052	68,733	60,889	2,531	7,313
	% Change	11.1	44.5	60.9	54.2	60.9	340.8
Madhya Pradesh ..	1963	43	139,855	33,140	17,317	12,789	3,034
	1968	49	167,271	80,113	14,558	56,532	9,023
	% Change	13.9	19.6	141.7	15.9	342.0	197.4
Madras ..	1963	16	168,271	35,086	31,096	2,227	1,763
	1968	18	227,525	90,298	73,760	9,170	7,368
	% Change	12.5	35.2	157.4	137.2	311.8	317.9
Maharashtra ..	1963	28	222,631	56,525	48,701	3,548	4,276
	1968	29	259,514	92,326	72,025	11,258	8,543
	% Change	3.6	16.6	63.3	47.9	217.3	100.0
Mysore ..	1963	20	96,209	41,491	36,474	2,112	2,905
	1968	21	167,746	78,404	51,427	20,074	6,903
	% Change	5.0	74.4	89.0	41.0	850.5	137.6
Orissa ..	1963	13	80,236	12,624	10,441	956	1,227
	1968	15	87,798	26,273	19,796	2,443	4,034
	% Change	15.4	9.4	108.1	89.6	155.5	230.6

TABLE 40-A (concd)

State/Union Territory	Year Change	Ex- change	All Job- seekers	Matricu- lates & Higher Educated	Matricu- lates	Inter- mediates	Graduates & Post- graduates
Punjab	.. 1963	31	72,737	26,377	21,643	3,093	1,641
	1968*	32	102,951	45,281	29,143	8,758	7,380
	% Change	3.2	41.5	71.7	34.6	186.4	749.7
Rajasthan	.. 1963	18	49,077	24,333	19,208	3,531	1,594
	1968	19	82,666	46,288	25,511	14,659	6,118
	% Change	5.5	68.4	90.2	32.8	315.2	283.8
West Bengal	.. 1963	25	486,498	107,657	65,305	28,961	13,391
	1968	29	398,096	146,857	67,025	56,340	23,492
	% Change	16.0	-18.2	36.4	2.6	94.5	75.4
Uttar Pradesh	.. 1963	53	407,136	115,245	77,901	26,578	10,766
	1968	59	279,718	124,174	69,327	28,276	16,571
	% Change	11.3	-31.3	7.7	-11.0	6.4	53.9
Delhi	.. 1963	2	72,175	33,968	25,862	2,823	5,283
	1968	11	91,757	49,691	24,526	15,919	9,246
	% Change	450.0	27.1	46.3	-5.2	463.9	75.0
Goa	.. 1965	1	4,268	834	710	34	90
	1968	1	6,174	2,141	1,784	151	206
	% Change	..	44.7	156.7	151.3	344.1	128.9
Himachal Pradesh	.. 1963	6	6,008	1,444	1,321	73	50
	1968	10	38,561	10,262	8,192	1,376	694
	% Change	66.3	541.8	610.7	520.1	1,784.9	1,288.0
Manipur	.. 1963	1	4,864	1,364	912	323	129
	1968	1	11,206	2,379	1,337	709	333
	% Change	..	130.4	74.4	46.6	119.5	158.1
Pondicherry	.. 1963	1	1,774	246	201	26	19
	1968	1	6,875	1,970	1,652	142	166
	% Change	..	287.5	700.0	721.9	446.2	773.7
Tripura	.. 1963	1	4,775	1,531	1,238	146	147
	1968	1	15,429	7,763	5,876	1,332	555
	% Change	..	223.1	407.1	374.6	812.3	277.6

\*Figures include the data for Chandigarh and Haryana.

NOTES : (1) The data on Exchanges and males on the Live Register in 1963 and 1968 relate to the situation at the end of December of the relevant year.

(2) The figures without any prefixed sign, shown in rows indicating percentage change in the number of registrants during 1963-68, denote increases. Figures indicating decreases bear the minus sign.

TABLE 40-B

*The Change in the Number of Exchanges and Females on the Live Register in Different States of India during 1963—68 According to the Educational Level of Applicants*

State/Union Territory	Year Change	Ex- changes	All Job- seekers	Matricu- lates & Higher Educated	Matricu- lates	Inter- mediates	Graduates & Post- graduates
Andhra Pradesh	.. 1963	23	9,182	2,183	1,655	254	274
	1968	24	16,859	5,857	3,103	1,749	1,005
	% Change	4.3	83.6	168.3	87.4	588.6	266.8
Assam	.. 1963	21	1,269	1,021	806	192	23
	1968	24	2,367	1,973	1,284	469	222
	% Change	14.3	86.5	93.2	59.3	143.2	595.2
Bihar	.. 1963	22	6,425	1,131	857	144	130
	1968	23	7,693	1,973	1,220	299	454
	% Change	4.5	19.7	74.4	42.4	107.6	249.2
Gujarat	.. 1963	18	6,981	2,513	1,984	145	384
	1968	20	16,931	7,602	5,727	474	1,401
	% Change	11.1	142.5	202.5	188.7	226.9	264.8
Jammu and Kashmir	.. 1963	2	135	34	30	1	3
	1968	8	144	104	37	11	53
	% Change	300.0	6.7	197.1	23.3	1,000.0	1,666.7
Kerala	.. 1963	9	37,879	25,380	24,464	290	626
	1968	10	67,954	46,238	41,599	1,364	3,275
	% Change	11.1	79.4	82.8	70.0	370.3	423.2
Madhya Pradesh	.. 1963	43	7,005	2,280	1,467	498	315
	1968	49	13,883	6,112	1,029	3,766	1,317
	% Change	13.9	98.2	168.1	—29.9	656.2	318.1
Madras	.. 1963	16	25,130	7,750	7,418	137	195
	1968	18	48,882	23,522	21,260	652	1,610
	% Change	12.5	94.5	203.5	186.6	375.9	725.6
Maharashtra	.. 1963	28	22,668	9,313	8,369	241	703
	1968	29	35,203	17,927	15,663	742	1,522
	% Change	3.6	55.3	92.5	87.2	207.9	116.5
Mysore	.. 1963	20	13,495	5,103	4,511	136	456
	1968	21	28,940	15,838	8,863	5,549	1,426
	% Change	5.0	114.4	210.4	96.5	3,980.1	212.7
Orissa	.. 1963	13	2,404	204	159	19	26
	1968	15	3,292	662	404	58	200
	% Change	15.4	36.9	224.5	154.1	205.3	669.2

TABLE 40-B (CONCLD)

State/Union Territory		Year Change	Ex- changes	All Job- seekers	Matricu- lates & Higher Educated	Matricu- lates	Inter- mediates	Graduates & Post- graduates
Punjab	..	1963	31	10,334	5,159	4,081	379	699
		1968	32	26,934	16,569	10,516	2,247	3,806
		% Change	3.2	160.6	221.2	157.7	492.9	444.5
Rajasthan	..	1963	18	3,879	1,149	875	146	128
		1968	19	6,040	2,261	1,199	605	457
		% Change	5.5	55.7	96.8	37.0	314.4	257.0
Uttar Pradesh	..	1963	53	10,576	2,341	1,573	421	347
		1968	59	13,813	3,392	1,694	843	855
		% Change	11.3	30.6	44.8	7.7	100.2	146.4
West Bengal	..	1963	25	24,040	14,440	8,744	4,457	1,239
		1968	29	36,327	22,557	6,869	11,266	4,422
		% Change	16.0	51.1	56.2	-11.4	152.8	256.9
Delhi	..	1963	2	14,697	9,553	7,043	729	1,781
		1968	11	21,137	16,861	6,629	5,092	5,140
		% Change	450.0	43.6	76.5	-5.9	598.5	188.6
Goa	..	1965	1	277	..	..	..	..
		1968	1	1,084	539	488	27	24
		% Change	..	473.0	..	..	..	..
Himachal Pradesh	..	1963	6	572	162	141	12	9
		1968	10	4,210	1,771	1,256	290	225
		% Change	66.3	636.0	993.2	790.8	2,316.7	2,400.0
Manipur	..	1963	1	379	97	63	26	8
		1968	1	1,521	458	299	105	54
		% Change	..	301.3	377.2	374.6	303.8	575.0
Pondicherry	..	1963	1	81	31	30	..	1
		1968	1	1,686	380	346	26	18
		% Change	..	1,981.5	1,061.3	1,053.3	..	1,700.00
Tripura	..	1963	1	858	275	245	19	11
		1968	1	3,126	2,210	2,012	88	110
		% Change	..	264.3	708.7	721.2	363.2	900.0

153. As might be expected from the earlier discussion, for India as a whole, the number of Intermediates on the Live Register increased faster than that of matriculates. In fact, the number of matriculates on the Live Register declined in Madhya Pradesh, Uttar Pradesh, West Bengal and Delhi. Yet in all States, except in Madhya Pradesh, the number of matriculate job-seekers exceeded that of Intermediates by a substantial margin. The figures for Madhya Pradesh appear quite odd, with the number of intermediates on the Live Register exceeding the matriculates by almost 300 per cent. The explanation is likely to be some difference(s) in the procedures of classification of educational qualification or in the certificates awarded by the educational authorities in different States.

154. If the intermediates and matriculates on the Live Register are grouped together, the increase in the number of graduate and post-graduate job-seekers would exceed that of the former. The rapid growth of college and University enrolments after Independence is naturally reflected after a time-lag in an increasing output of graduates and post-graduates who seek opportunities for work<sup>44</sup>.

155. A comparative examination of the data for male and female job-seekers in Tables 40A and 40B in different parts of the country shows that Bihar was the only State where the increase in the number of female jobseekers was less than that for males. In all other States and Union Territories, the percentage increase among registered male job-seekers was less. Yet, at the end of 1968, the absolute number of female job-seekers was much smaller than of male job-seekers; in India as a whole only 11.9 per cent of the job-seekers on the Live Register were females (See Annexure III, Table A.5). A major underlying factor is probably the differences in labour force participation rates by sex in urban India. However, as already noted, the urban female participation rates are probably rising. Besides the facilitating factor of a rise in the mean age at marriage, the inflationary pressures in the economy have probably stimulated more frequent search for employment by women.

156. The inflation has probably contributed also to a more active search for better jobs by persons already employed. Moreover, the opening of new Exchanges, a growing awareness of the need for registration with an Employment Exchange for public sector jobs and familiarity with procedures would also cause an increase in the number of persons on the Live Register.

157. It is not possible to compare the Employment Exchange statistics and the picture suggested by them with the information available from the NSS partly because of the delay in the processing and publication of the NSS results and the differences in the details of cross-classification adopted by the two agencies. Even more serious is the non-comparability of the concepts and/or procedures underlying the two sets of statistics. It remains to be seen as to what the NSS surveys conducted after 1966-67 will show regarding the level of unemployment. It is unlikely, however, that the gap between the level of unemployment suggested by the NSS and the number of job-seekers registered with employment exchanges will narrow down.

158. It is nevertheless true that the increase in the number of persons on the Live Register after 1966 has been associated with a slowdown of the rate of growth of employment in the organized sector of the economy. The evidence is based on the estimates prepared by the D.G.E.T. Let us briefly examine these data.

## VII

### EMPLOYMENT IN THE ORGANIZED SECTOR OF THE INDIAN ECONOMY

159. Under the Employment Market Information Programme of the D.G.E.T., at the end of each quarter, information is collected on the number of employees in all public sector establishments, and in the private sector establishments employing 25 or more workers. Not all the establishments on the Employers' Register maintained by the Employment Exchanges respond to the postal enquiry despite reminders. Some rough estimates are made for the employment provided by such non-responding establishments. Table 41 shows the aggregate employment as well as the quarterly percentage change in it, separately for the public sector and private sector establishments.

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<sup>44</sup>Whatever may be said about the objectives of education more than 98 per cent of the male graduates seek employment and expect to benefit from their education in terms of the salary and working conditions. The proportion of female graduates in the labour force also exceeds the level reported for less-educated females in urban areas. While the female graduates often accept lower pay than male graduates, their expectations also rise after their attainment of a degree.

160. It should be noted that the reported increase of 6.6 per cent in the public sector employment during January 1—March 31, 1966, is spurious. It is the result of a sharp increase in the reported number of persons employed by the State Governments, arising from the inclusion of employment in scarcity relief works with other employment by the State Governments. If this spurious observation is ignored, after March 31, 1966, one observes a clear decline in the rate of increase of the public sector employment. Simultaneously the private sector has been affected by recession at least between January 1, 1967 and September 30, 1968. During this period, there was a decline of about 6.3 per cent in the employment in the private sector establishments. The University-educated, employed primarily as wage employees in the organized sector of the economy, have naturally faced a very difficult situation in finding jobs.

161. The slowdown of public sector investment has partly been the result of the decline in the public savings because of the need to pay higher dearness allowances to the public sector employees and to meet the requirements of scarcity relief works. As a result, the rate of increase of expenditure on education has also slowed down. It is, perhaps, well known that educational institutions tend to be a major employer of the College and University-educated.

162. The figures for the public sector presented in Table 41 refer only to civilian employment. The increase in the non-civilian or the defence sector employment during 1962—67 is difficult to estimate but it is unlikely to have exceeded 1 million (including ancillary non-combat personnel). Quite probably, the recruitment to the defence services has also slowed down after 1966 and has contributed to the rise in the number of Work-seekers on the Live Register of Employment Exchanges.

TABLE 41  
*Employment in the Organised Sector of the Indian Economy according to the Employment Market Information Programme, 1961—69*

Period		Employment (in lakhs)			Quarterly Percentage Change in Employment		
		Private Sector Employing 25 or more Workers	Public Sector	Total	Private Sector Employing 25 or more Workers	Public Sector	Total
1961	March	50.4	70.5	120.9	-2.2	—	
	June	48.2	71.1	119.3	-4.37	0.85	1.32
	September	48.0	72.5	120.5	-0.41	1.97	1.09
	December	50.4	73.2	123.6	+5.00	0.97	2.57
1962	March	51.6	74.2	125.8	2.38	1.37	1.78
	June	50.2	75.2	125.4	-2.71	1.35	-0.32
	September	51.5	76.7	128.2	2.59	1.99	2.23
	December	54.5	78.1	132.6	5.83	1.83	3.43
1963	March	54.5	79.5	134.0	0.00	1.79	1.06
	June	53.9	80.6	134.5	-1.10	1.38	0.37
	September	53.5	81.8	135.3	-0.74	1.49	0.59
	December	55.3	83.3	138.6	3.36	1.83	2.44
1964	March	55.9	84.5	140.4	1.08	1.44	1.30
	June	58.1	86.0	144.1	3.94	1.78	2.64
	September	57.8	86.8	144.6	-0.52	0.93	0.35
	December	59.6	87.9	147.5	3.11	1.27	2.01

TABLE 41—concl'd

*Employment in the Organised Sector of the Indian Economy according to the Employment Market Information Programme, 1961—69*

Period	Employment (in lakhs)			Quarterly Percentage change in Employment		
	Private Sector Employing 25 or more Workers	Public Sector	Total	Private Sector Employing 25 or more Workers	Public Sector	Total
1965 March	.. 60.4	89.6	150.0	1.34	1.93	1.69
June	.. 59.1	90.2	149.3	-2.15	0.67	-0.47
September	.. 58.7	86.8	144.6	-0.68	-3.77	-3.08
December	.. 59.6	87.9	147.5	1.53	1.27	2.01
1966 March	.. 60.9	93.7	154.6	2.18	6.60	4.81
June	.. 59.1	93.9	153.0	-2.96	0.21	-1.03
September	.. 58.6	94.6	153.2	-0.85	0.75	0.13
December	.. 60.1	95.4	155.5	2.56	0.85	1.50
1967 March	.. 59.9	96.3	156.2	-0.33	0.94	0.47
June	.. 58.2	96.3	154.5	-2.84	0.00	-1.08
September	.. 57.1	96.6	153.7	-1.89	0.31	-0.55
December	.. 58.4	97.3	155.7	2.28	0.72	1.34
1968 March	.. 58.1	98.0	156.1	-0.51	0.72	0.23
June	.. 57.3	98.1	155.4	-1.38	0.10	-0.46
September	.. 56.3	98.8	155.1	-1.75	0.71	-0.19
December	.. 57.6	99.3	156.9	2.31	0.51	1.16
1969 March	.. 58.7	100.3	159.0	1.91	1.01	1.34

NOTE : The above figures include estimates for non-responding establishments.  
SOURCE : D.G.E. & T. (based on EMI)

#### *Employment in the Central Government*

163. Table 42 presents the statistics on the growth of employment in the Central Government over the period 1952—68. Data on the number of persons employed by the Railways are shown separately but they are included also among the "regular" and "all" employees. It was during 1962—64 that the Central Government employment expanded by about 8 to 9 per cent. There after, the rate of increase has slowed down considerably, partly because of the slowdown of the public sector investment. The slow growth of the railways employment during 1966—68 is also the result of the curtailment of investment. The rise in the defence expenditure after 1962, the requirements of scarcity relief works in the drought-hit areas, the inflationary pressures in the economy and the cut in foreign aid after 1965-66 all contributed to the slowdown of public investment after the end of the Third Plan, which had an adverse effect also on the level of private sector investment.

164. It is sometimes argued that the public sector has already expanded too rapidly and that the productivity of the staff tends to be low. Reportedly, the work-norms in much of the organized sector are pitched unduly low so that there is widespread under-utilization of the available labour



time. Under-employment in the sense of an under-utilization of actual or potential skills is also an all-pervasive characteristic of an under-developed economy. The remedial measures for reducing such under-employment as well as for augmenting the work available to persons relegated to shorter than desired duration of employment are somewhat different from those for relieving open unemployment.

## VIII

## LIMITATIONS OF THE REVIEW

165. In concluding this review, of selected statistics on Employment and Unemployment in India, the author must record his awareness of its limitations. Despite the length of the review, several gaps remain, the most important of which is the absence of any discussion of the statistics on (a) the "intensity of work" or hours of work reported by persons classified as employed and (b) on their availability for additional work, i.e. visible under-employment<sup>56</sup>. Despite the limitations of the data available on these subjects, they can provide a useful supplement to the information on unemployment reviewed above. While it is extremely important to distinguish between open unemployment and under-employment, the two phenomena are closely linked and should not be viewed in isolation.

TABLE 42

*Trends in Employment in the Central Government during 1952—1968*

Reference Date	All Regular Employees (in lakhs)	Percentage Increase over the Previous Year	Employees in Railways (in lakhs)	Percentage Increase over the Previous Year	All Employees* (in lakhs)	Percentage Increase over the Previous Year
March 31, 1952	15.47	—	9.32	—	—	—
March 31, 1953	15.51	0.23	9.35	0.30	—	—
March 31, 1954	15.98	3.04	9.65	3.28	—	—
March 31, 1955	16.38	2.50	9.90	2.57	17.14	—
March 31, 1956	17.00	3.80	10.31	4.10	17.80	3.87
March 31, 1957	17.52	3.06	10.63	3.13	18.17	2.09
March 31, 1958	18.33	4.61	11.19	5.25	18.99	4.52
March 31, 1959	18.99	3.58	11.55	3.26	19.68	3.64
June 30, 1960	19.13	0.76	11.60	0.41	19.81	0.62
March 31, 1961	19.87	3.67	11.66	0.56	20.94	5.70
March 31, 1962	20.51	3.22	11.80	1.20	21.56	2.96
March 31, 1963	22.01	7.31	12.29	4.15	23.49	8.95
March 31, 1964	23.73	7.81	12.81	4.23	25.36	7.96
March 31, 1965	24.20	1.98	13.15	2.65	26.37	3.98
March 31, 1966	25.13	3.84	13.51	2.73	27.10	2.77
March 31, 1967	25.46	1.31	13.59	0.59	27.46	1.33
March 31, 1968	25.85	1.53	13.58	-0.08	27.93	1.71

\*The figures include employees in non-regular establishments such as casual labour, workcharged personnel, contingency staff.

SOURCE : Data for the period 1952—60 are taken from : Central Statistical Organization, Government of India Statistical Abstract, 1961 (pp. 512-513); 1962 (pp. 470—472). Statistics for 1961—68 are based on: D.G.E. & T Census of Central Government Employees as on 31st March, 1968 New Delhi, Cyclostyled, 1970, pp. 10-11.

<sup>56</sup>See, however, the main Report, Chapter II, Para 15 ;

166. Equally important is the question of earnings of those classified as employed. For some segments of the employed (particularly the employees), the NSS has collected and tabulated information on this subject, particularly during the recent Rounds undertaken after 1961. Once again, the data may not be very accurate but they need to be examined carefully. Employment planning is important not only for the purpose of giving every member of the labour force the satisfaction of contributing to the output of goods and services in the community but also for ensuring for him and his dependents a certain minimum income level in real terms. The acceptable minimum will change with the growth of the economy and the supply of community services. However, it must form the basic objective of policies regarding distribution of income and employment.



## ANNEXURE I

*A List of Sources of Regular Statistics on Employment, Unemployment and Under-employment*

Subject/Sector	Publication	Organization	Periodicity of Publication
<b>I. LABOUR FORCE</b>			
1. Labour Force ..	(a) Census Reports (b) NSS Reports	Office of the Registrar-General (R.G.) Cabinet Secretariat	Decennial By Rounds
<b>II. EMPLOYMENT*</b>			
1. Agriculture ..	(a) Census Reports (b) NSS Reports	Office of the R.G. Cabinet Secretariat	Decennial By Rounds
2. Plantations—			
(i) Tea ..	(a) Tea in India	Directorate of Economics and Statistics	Annual
(ii) Coffee ..	(b) Coffee in India		Annual
(iii) Rubber ..	(c) Rubber in India		Annual
3. Animal Husbandry, Fishing and Forestry	Indian Forests Statistics	Directorate of Economics and Statistics	Annual
4. (i) Mining and Quarrying	Annual Reports of Chief Inspector of Mines	Chief Inspector of Mines	Annual
(ii) Coal ..	(a) Monthly Review of Production and Distribution of Coal (b) Monthly Coal Bulletin (c) Indian Coal Statistics	Coal Board Chief Inspector of Mines Chief Inspector of Mines	Monthly Monthly Annual
5. Factories and Other Large Scale Industries	(a) Indian Labour Year Book (b) Indian Labour Statistics (c) Large Industrial Establishments in India (d) Monthly Textile Bulletin (e) Annual Report of the Development Wing (f) Census of Indian Manufactures (up to 1958) (g) Annual Survey of Industries (since 1959) (h) Statistics of Factories	Labour Bureau, Simla Labour Bureau, Simla Labour Bureau, Simla Textile Commissioner, Bombay Department of Technical Development Industrial Statistics Wing of Central Statistical Organization Industrial Statistics Wing of the Central Statistical Organisation Labour Bureau, Simla	Annual Annual Annual Monthly Annual Annual Annual Annual
6. Cottage and Small Scale Industries	(a) Statistical Bulletin (b) Annual Report of the Khadi and Village Industries Commission (c) NSS Reports No. 19, 21, 42 and 43	All-India Handicrafts Board Khadi and Village Industries Commission Cabinet Secretariat	Monthly Annual By Rounds
7. Posts and Telegraphs	Activities of the Indian Posts and Telegraph Department	Directorate of Posts and Telegraphs	Annual
8. Railways ..	Report of the Railway Board on Indian Railways	Railway Board	Annual

## ANNEXURE I—CONCLD

Subject/Sector	Publication	Organization	Periodicity of Publication
9. Means of Transport [other than Railways]	(i) Census Reports	Office of the R. G.	Decennial
	(ii) Annual Reports Major Ports	Major Ports	Annual
10. Building Construction	Census Reports	Office of the R.G.	Decennial
11. Civilian Government Employees	(a) Census of Central Government Employees	D.G.E. & T.	Annual
	(b) Census of State Government Employees	State Statistical Bureaus	Annual
12. Public Utilities and Social Services, Quasi-Government, Autonomous and Local Bodies	(a) Census Reports	Office of the R. G.	Decennial
	(b) Employment in the Public Sector - All-India Quarterly Reports	D.G.E. & T.	Quarterly
13. Trade and Commerce	(a) Census Reports	Office of the R.G.	Decennial
	(b) Indian Labour Journal	Labour Bureau, Simla	Monthly
	(c) Indian Labour Statistics	Ditto	Annual
	(d) Quarterly Employment Review	D.G.E. & T.	Quarterly
14. Banking and Insurance	(a) Employment in Banks	Central Statistical Organization	Annual
	(b) Employment in Insurance	Ditto	Annual
III. UNEMPLOYMENT	(a) Employment Exchange Statistics	D.G.E. & T.	Monthly
	(b) Educated Unemployed on the Live Register of Employment Exchanges	Ditto	Half-yearly
	(c) NSS Reports	Cabinet Secretariat	By Rounds
IV. UNDER-EMPLOYMENT	NSS Reports	Cabinet Secretariat	By Rounds

\*The 1961 Census Reports provide information on employment in all the sectors of economy, but the census has not been listed against each sector. Similarly, the E.M.J. collects data from establishments in all sectors except agriculture but it has not been listed against each sector.

## ANNEXURE II

*The Distribution of 1,000 Workers in Rural Maharashtra in Each Sex-Age Group by Industrial Category*

Age	All	Industrial Category								
		I	II	III	IV	V	VI	VII	VIII	IX
MALES										
All Ages	1,000	557	245	34	51	19	12	22	8	53
10 and over	1,000	560	244	31	50	19	12	22	8	53
10-14	1,000	430	318	160	52	5	5	6	1	24
15-19	1,000	525	303	39	50	16	10	18	4	36
20-24	1,000	510	264	21	54	26	16	26	10	74
25-29	1,000	529	256	20	52	26	16	24	11	67
30-34	1,000	540	249	20	51	24	16	25	11	62
35-39	1,000	564	236	20	50	22	13	25	11	58
40-44	1,000	576	230	20	51	20	13	25	10	56
45-49	1,000	605	212	19	49	17	12	23	9	53
50-54	1,000	624	205	19	49	13	10	22	8	50
55-59	1,000	672	179	17	47	10	8	22	5	39
60-64	1,000	688	175	18	47	8	7	20	3	34
65-69	1,000	727	148	16	45	6	5	19	2	32
70+	1,000	739	141	15	45	5	5	18	1	31
FEMALES										
All Ages	1,000	592	346	7	27	3	4	5	—	17
10 and over	1,000	593	344	7	27	3	4	5	—	17
10-14	1,000	546	396	10	27	22	4	2	—	14
15-19	1,000	604	338	6	26	4	4	3	—	14
20-24	1,000	592	344	7	28	4	5	3	—	17
25-29	1,000	596	339	8	28	3	5	4	—	16
30-34	1,000	595	340	8	27	3	4	6	—	17
35-39	1,000	602	335	7	26	3	3	6	—	18
40-44	1,000	595	342	7	25	3	3	7	—	19
45-49	1,000	615	324	7	25	2	2	7	—	18
50-54	1,000	599	339	7	24	2	2	8	—	19
55-59	1,000	612	326	6	25	2	1	9	—	19
60-64	1,000	568	364	6	26	2	1	11	—	22
65-69	1,000	578	356	6	25	2	1	11	—	22
70+	1,000	540	380	5	31	2	1	14	—	27

The Industrial categories connote the following :—

- I= Cultivation ;
- II= Agricultural Labour ;
- III= Mining, quarrying animal husbandry, forestry, fishing, hunting, plantation work, orchardry and allied activities ;
- IV= Household Industry ;
- V= Manufacturing other than household industry ;
- VI= Construction ;
- VII= Trade and Commerce ;
- VIII= Transport, Storage and Communication ;
- IX= Other services.

NOTE .—Figures for each category have been rounded independently.

SOURCE .—Pravin Visaria, The Working Force of Maharashtra State in India, 1961, Mimeographed, pp. 76-77

TABLE A-1

*The Percentage Age Distribution of the Unemployed in Urban India, by Sex, according to the National Sample Survey Data for Specified Rounds*

Age	Males				Females			
	9th Round	10th Round	11th and 12th Round	13th Round	9th Round	10th Round	11th and 12th Round	13th Round
0-6	0.04	—	0.16	—	0.00	—	—	—
7-15	4.57	3.91	4.89	9.66	7.14	6.03	6.00	5.64
16-17	7.81	7.47	6.06	5.63	11.75	8.02	10.40	3.86
18-21	34.22	31.68	27.22	22.04	29.38	20.15	20.93	20.61
22-26	24.99	21.65	19.59	19.71	21.18	21.34	16.89	18.84
27-36	14.51	17.64	18.51	18.71	19.58	24.53	22.53	17.71
37-46	7.92	10.16	12.50	11.42	7.61	14.69	13.32	18.04
47-56	3.85	5.26	7.15	8.12	2.41	4.35	7.09	10.63
57-61	0.96	1.26	3.09	2.75	0.83	0.52	2.34	3.06
62+	1.12	0.97	0.83	71.96	0.12	0.37	1.35	1.61
Not Recorded	0.01	—	—	—	—	—	0.15	—
All Ages	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Sample Persons	14,104	4,834	1,061	1,066	1,224	453	211	280

Age	Males		Females	
	14th Round	15th Round	14th Round	15th Round
0-11	0.14	0.67	—	—
12-14	3.59	3.99	—	1.32
15	1.72	3.99	—	4.31
16-17	10.84	15.88	2.64	10.43
18-21	27.88	25.82	22.11	20.53
22-26	23.12	17.64	20.46	15.89
27-36	15.46	13.41	20.46	17.05
37-46	7.80	7.89	11.22	16.23
47-61	7.93	9.23	21.79	9.60
62+	1.52	1.48	1.32	4.64
Not Recorded	—	—	—	—
All Ages	100.00	100.00	100.00	100.00
Sample Persons	367	508	70	127

Ages	Males				Females			
	16th Round	17th Round	18th Round	19th Round	16th Round	17th Round	18th Round	19th Round
10-14	0.98	1.56	0.57	0.90	4.25	0.93	—	2.74
15-19	27.51	27.80	24.83	61.15	21.52	26.33	28.14	56.49
20-24	36.08	32.59	37.69	25.36	26.14	28.31	24.88	—
25-29	14.57	11.79	14.30	—	14.30	13.51	14.30	25.54
30-39	9.34	12.14	11.52	11.09	15.42	17.61	21.17	14.19
40-49	6.60	8.05	4.92	—	8.86	9.75	6.72	—
50-59	3.91	6.07	4.48	1.50	9.25	3.56	3.50	1.04
60+	0.97	—	1.69	—	0.17	—	1.29	—
Not Recorded	0.04	—	—	—	0.09	—	—	—
All Ages	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Sample Persons	3,330	10,325	612	789	480	1,787	145	184

SOURCE :—National Sample Survey, Reports No. 62 (pp. 191, 192) ; 34 (pp. 98, 100) ; 52 (pp. 113, 115) ; 63 (pp. 52, 54) ; 85 (pp. 50, 54) ; 169 (Draft) (pp. 23, 25) ; 103 (p. 31) ; 127 (p. 48) ; 164 (Draft) (p. 32) ; 181 (Draft) (p. 56).

TABLE A-2

*The Percentage Age Distribution of the Unemployed in Rural India, by Sex, According to the National Sample Survey Data for Specified Rounds*

Age	Males			Females		
	9th Round	10th Round	11th and 12th Round	9th Round	10th Round	11th and 12th Round
0-6	—	—	0.03	—	—	0.04
7-15	11.15	12.49	8.63	2.35	14.46	9.67
16-17	15.02	9.89	5.84	11.64	3.42	4.86
18-21	36.10	27.67	16.20	29.96	12.19	12.27
22-26	22.35	14.39	17.95	15.18	18.19	14.70
27-36	6.81	15.88	21.11	18.44	28.27	25.19
37-46	2.31	8.72	14.58	19.09	12.99	20.06
47-56	1.91	8.96	9.44	3.34	9.79	9.75
57-61	1.41	1.94	3.14	—	—	2.06
62+	2.94	0.06	3.01	—	0.69	1.40
Not Recorded	—	—	0.07	—	—	—
All Ages	100.00	100.00	100.00	100.00	100.00	100.00
Sample Persons	216	295	3,439	25	109	3,113

Age	Males		Females	
	14th Round	15th Round	14th Round	15th Round
0-4	—	3.07	—	6.59
5-11	2.95	—	3.75	—
12-14	6.06	6.20	6.64	5.53
15	3.09	2.45	2.16	1.16
16-17	6.76	5.38	4.27	6.92
18-21	16.70	16.46	13.20	11.44
22-26	15.28	15.77	15.89	13.87
27-36	20.18	19.69	23.52	23.10
37-46	12.38	15.11	16.12	14.99
47-61	12.89	13.37	12.99	15.16
62+	3.71	2.50	1.44	1.24
Not Recorded	—	—	0.02	—
All Ages	100.00	100.00	100.00	100.00
Sample Persons	352	1,993	437	1,434

Age	Males			Females		
	16th Round	17th Round	21st Round	16th Round	17th Round	21st Round
0-4	—	—	—	—	—	—
5-9	1.00	0.89	4.23	0.37	0.68	5.89
10-14	7.24	3.58	15.63	8.82	4.64	9.84
15-19	14.14	18.22	21.65	13.88	15.32	15.26
20-24	14.70	16.00	14.80	17.43	15.31	12.38
25-29	13.65	14.00	8.87	14.39	14.95	8.65
30-39	18.14	21.60	14.52	20.76	22.61	17.86
40-49	15.39	13.53	9.54	12.80	14.49	15.43
50-59	9.62	8.12	7.33	8.75	8.44	9.79
60+	6.12	4.06	3.43	2.80	3.51	4.90
Not Recorded	—	—	—	—	0.05	—
All Ages	100.00	100.00	100.00	100.00	100.00	100.00
Sample Persons	1,161	3,381	230	968	5,743	264

SOURCE .—National Sample Survey, Reports No. 62 (pp. 157, 159) ; 34 (pp. 43, 45) ; 52 (pp. 56, 58) ; 100 (p. 58) ; 148 (Draft) (p. 36) ; 114 (pp. 35, 39) ; 197 (Draft) (pp. 23, 25).

TABLE A-3

*The Percentage Age Distribution of Unemployed of Each Sex, Enumerated by the 1961 Census in Urban and Rural India*

Age	Urban India		Rural India	
	Males	Females	Males	Females
<b>All Unemployed</b>				
0—14	2.52	1.00	5.20	9.02
15—34	78.46	83.15	80.43	74.17
35—59	17.00	13.82	12.48	11.79
60+	2.02	2.03	1.89	5.03
All	100.00	100.00	100.00	100.00
Number (Thousands)*	752	57	541	63
<b>Unemployed Seeking Employment for the First Time</b>				
0—14	3.03	0.85	5.52	8.95
15—34	88.87	90.71	88.07	82.17
35—59	7.67	7.91	5.96	7.26
60+	0.43	0.53	0.44	1.62
All	100.00	100.00	100.00	100.00
Number (Thousands)*	448	41	363	46
<b>Unemployed Employed Before</b>				
0—14	1.76	1.37	4.54	9.19
15—34	63.16	64.03	64.80	51.66
35—59	30.72	28.76	25.82	24.52
60+	4.36	5.84	4.84	14.63
All	100.00	100.00	100.00	100.00
Number (Thousands)*	305	16	178	16

\*The figures exclude persons whose ages were not stated. Their numbers were as follows :—

	Urban India		Rural India	
	Males	Females	Males	Females
All Unemployed	58	17	161	75
Unemployed—New entrants	30	6	74	16
Unemployed Employed Before	28	11	87	59

SOURCE . Census of India, 1961, Vol. I, India, Part II-B(iii), *General Economics Tables*, Table B-IX.



TABLE A-4

*A Detailed Age Distribution of the Unemployed Enumerated in Urban India by the 1961 Census*

Age	Unemployed Seeking Employment for the First Time		Age	Unemployed Employed Before	
	Males	Females		Males	Females
Below 15	3.03	0.85	Below 15	1.76	1.37
15—19	32.86	33.07	15—19	15.47	17.01
20—24	35.93	37.51	20—24	22.68	22.98
25—29	13.73	13.60	25—29	25.01	24.04
30—34	6.35	6.53	35—44	16.11	16.01
35+	8.10	18.44	45—59	14.61	12.75
			60+	4.36	5.84
All Ages	100.00	100.00	All Ages	100.00	100.00

SOURCE : Census of India, 1961, Vol. I, Part II-B (iii), *Op.cit.*, Table B-VIII.

TABLE A-5

(a) *The Percentage Age Distribution of Work Seekers Registered with Employment Exchanges and (b) the Percentage of Females Among Them in Each Age Groups, at the End of December, 1967 and December 1968*

Age	(a) Percentage Age Distribution						(b) Per cent	
	Persons		Males		Females		Females	
	December, 1967	December, 1968	December, 1967	December, 1968	December, 1967	December, 1968	December, 1967	December, 1968
Below 15	0.2	0.1	0.3	0.1	0.1	0.1	6.0	8.7
15—19	22.6	21.0	22.7	21.1	22.2	20.3	10.9	11.5
20—24	50.0	51.9	50.5	52.4	46.5	48.5	10.4	11.1
25—34	20.9	21.2	20.3	20.6	24.9	25.5	13.3	14.3
35—44	4.9	4.6	4.8	4.6	5.4	4.8	12.4	12.4
45—54	1.2	1.0	1.2	1.0	0.8	0.7	8.0	9.3
55+	0.2	0.2	0.2	0.2	0.1	0.1	4.1	4.1
All Ages	100.0	100.0	100.0	100.0	100.0	100.0	—	—
Number (Thousands)	2,740	3,012	2,435	2,654	306	358	11.2	11.9

SOURCE.—Ministry of Labour, Employment and Rehabilitation, D.G.B. & T., *Employment Review, 1967-68* pp. 76-77. The figures for December, 1968, are based on a personal communication.

## APPENDIX III

EMPLOYMENT EXCHANGE DATA ON UNEMPLOYMENT : AN ATTEMPT  
IN APPLYING CORRECTION FACTORSBy  
J. Krishnamurthy

The figures provided by the Employment Exchanges on the number of work seekers on the Live Register cannot be taken to represent the number of unemployed persons, unless a number of correction factors are applied and even then, the estimates so obtained are questionable. The work seekers on the Live Register include (1) rural registrants and (2) employed or student urban registrants. The Live Register does not include all urban unemployed: it includes only those who register as work seekers with the employment exchange. So, we have to exclude from the Live Register figures, rural registrants, urban employed registrants and urban student registrants; then we have to inflate our result to convert urban unemployed registrants into urban unemployed persons. We take no account of the possibility and extent of multiple registrations, since no evidence is available.

2. In December, 1968, there were about 3 million persons on the Live Register. Of these, about a third were rural registrants (according to a Survey by the Directorate-General of Employment and Training conducted in 1968). So only about 2 million were urban registrants. About half the urban registrants were not unemployed (again according to the DGET Survey), so only 1 million were urban unemployed registrants. According to the National Sample Survey, about 40 per cent of urban unemployed persons register with the employment exchanges<sup>1</sup>. This means that there were about 2.5 million urban unemployed persons. Since the urban labour force was about 33 million in 1968, the unemployment rate would be roughly 7.5 per cent. This ratio seems very high compared with the NSS result for the 17th and 18th Rounds of 2 per cent unemployed or 4 per cent including "severely under-employed" (those working for less than 28 hours a week and available for additional work). For the 21st Round (1966-67) the proportion unemployed was 1.6 per cent and if we include the "severely under-employed", even then the proportion would not exceed 3 per cent of the labour force.

3. One explanation may be that the DGET Survey, conducted by virtually the same agency as the Employment Exchanges, prevented some respondents from admitting that they were employed. For instance, if instead of 50 per cent, we assume that 40 per cent were unemployed persons, then, this would mean that 2 million persons or 6 per cent of the urban labour force was unemployed. Even this lies outside the upper bound set by the NSS result of 4 per cent unemployed or "severely under-employed". But if we assume 30 per cent were unemployed persons, then we would get an urban unemployment rate of about 4.5 per cent.

TABLE I

*Estimates of Urban Unemployment by Educational Level Based on Corrected Live Register Data*

Educational level	Work seekers on the Live Register, 1968 Dec. ('000)	Urban share*	Urban work seekers ('000)	Urban registered employed as % of urban work seekers*	Urban registered unemployed ('000)	Urban registered unemployed as % of urban unemployed (NSS 20th Round)	Urban unemployed ('000) (NSS 20th Round)
1	2	3	4	5	6	7	8
1. Graduate and above ..	175	78.8%	137.9	50.4	69.5	54.21	128.9
2. Matric and above but below B.A. ..	1,134	64.6%	732.6	52.3	383.1	65.0†	589.4
3. Total ..	3,012	65.6%	1,975.9	49.6	980.0	38.36	2,554.7

\*SOURCE.—DGET Survey.

†The figure of 65 per cent is approximate since the educational level classifications of NSS and the Employment Exchange do not fully coincide.

<sup>1</sup>The proportion was 38.36% in the 19th Round (1964-65) and 43.58% in the 21st Round (1966-67).

4. Similar adjustments can be made in the case of educated registrants on the Live Register (see Table 1). While the raw data for December, 1968, suggest that 43.5 per cent of the work-seekers were matriculates or above (what we shall call educated persons), our corrected data suggest that educated unemployed formed 29.1 per cent of the urban unemployed. The major cause of this difference is because only about 5 per cent of unemployed illiterates register at employment exchanges, while at the other extreme over 50 per cent of the educated unemployed register themselves (NSS, 20th Round).

5. If instead of the 20th Round results, we use the results of the 21st Round of the NSS to obtain the proportions of educated unemployed persons who register themselves, out of the urban unemployed 29.1 per cent were educated persons. The direct estimates of the NSS 21st Round suggest that 35 per cent of the unemployed in urban areas were educated persons. So, both the NSS and the "corrected" Live Register estimates suggest roughly the same proportion of educated unemployed persons.

6. Unfortunately, it is not possible to obtain similar estimates for earlier years since one is not sure whether the correction factors obtained from the DGET Survey would hold for earlier years, and, in fact, even for the year of the Survey, there are reasons to doubt the accuracy of the correction factors suggested. Also, it should be noted that the percentage of urban un-employed persons registering with the Exchanges recorded by the NSS has also fluctuated from Round to Round. This will be obvious from Table 2 below :—

TABLE 2

*Percentage of Unemployed Persons in Urban India Reporting Registration with an Employment Exchange according to Selected Rounds of the NSS*

Round	Percentage
17th (September, 1961—July, 1962)	30.33
18th (February, 1963—January, 1964)	40.89
19th (July, 1964—June, 1965)	38.34
20th (July, 1965—June, 1966)	38.36
21st (July, 1966—June, 1967)	43.58

7. The most questionable correction factor used in the above exercises is the proportion of registrants among the urban unemployed, which is obtained from the NSS. What is implied in the use of this correction factor? Let  $R$  be the Live Register figure of the Employment Exchanges corrected to eliminate rural, student and employed registrants. It therefore includes only urban unemployed registrants. Then :—

$$\begin{aligned}
 \text{Urban unemployed} &= R \left\{ \frac{\text{Urban unemployed (NSS)}}{\text{Urban unemployed registrants (NSS)}} \right\} \\
 \text{i.e. Urban unemployed} &= \left\{ \frac{\begin{array}{c} \text{(Employment Exchange)} \\ \text{Urban unemployed registrants} \end{array}}{\text{Urban unemployed registrants (NSS)}} \right\} \text{Urban unemployed (NSS)}
 \end{aligned}$$

8. In essence, this means that our new unemployment estimate is obtained by using a multiplier upon the NSS unemployment estimate. The new estimate depends very much on whether the urban unemployed registrants of the Employment Exchange were greater than, less than, or equal to the corresponding NSS figure. The validity of the numerator of the multiplier rests upon the adequacy of the earlier correction factors in eliminating all registrants who are not urban unemployed

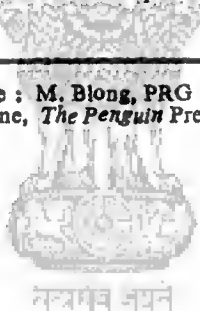
persons. The validity of the denominator of the multiplier is also questionable. This represents one of the weakest estimates of the NSS because the respondent is in this case asked to recall an event (registration) which may have taken place not during the reference week but several weeks or even months earlier. In fact the multiplier probably reflects to a considerable extent the failure to exclude multiple registrations from the numerator and to include all actual live registrations by unemployed persons, in the denominator.

9. If the numerator and the denominator of this multiplier were accurately estimated, then for a given year they ought to be equal (since they relate to the same thing). In that case the final estimate of unemployment we get for that year would be the same as the NSS estimate. If we take 1966-67 as an example, according to the NSS 21st Round 1.6 per cent of the urban labour force was unemployed. If we assume that the size of the urban labour force was 30 million, then about 5 lakhs were unemployed in urban areas. Since about 44 per cent of the unemployed registered themselves this implies that urban unemployed registrants were about 2.2 lakhs. On the other hand, the raw Live Register figure comes to 2.6 million for December, 1966 (and 2.7 million for December, 1967). Unless we assume that out of these 2.6 million registrants, over 2.3 million were accounted for by rural, students and employed registrants (which would require heroic correction factors) it is just not possible to reconcile the two estimates which relate to the same period<sup>2</sup>.

10. If even for a given year, the NSS data and the Live Register data do not give the same figure (or even broadly similar figures), it would be improper to use the Live Register (corrected) data for the current year and the NSS proportion of some past year to estimate urban unemployment in the current year. This would be true even if all the other correction factors (to exclude student, rural and employment registrants) were perfectly accurate and stable. Therefore efforts to improve correction factors seem to be of limited value. Perhaps it would be better to concentrate on improving the NSS estimates to give an accurate picture of the urban unemployment situation with the required degree of disaggregation. But since "quick" estimates would also be necessary, it seems necessary to improve the Employment Market Information data which could provide a quick, though very broad, picture of the employment situation in urban areas.

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<sup>2</sup>For a somewhat similar conclusion see : M. Blong, PRG Layard and M. Woodhall : *Census of Graduate Unemployment in India*. Allen Lane, The Penguin Press, London, 1969, pp. 63—67.





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## APPENDIX IV

## A NOTE ON THE EDUCATED UNEMPLOYED

The educated unemployed form an important segment of the unemployed in the country. A separate identification and detailed analysis of their problems is very important. The attention given so far to measuring the trends in the number and composition of the educated unemployed has however been rather inadequate.

2. The estimates of the educated unemployed made hitherto are based mainly on two sources of data, the Live Registers of the Employment Exchanges and the National Sample Survey<sup>1</sup>. Estimates based on the former are subject to the same limitations as those for all urban unemployed based on these data<sup>2</sup>.

3. The data from the Employment Exchanges are frequently used to estimate the educated unemployed, partly because a much higher proportion of the educated unemployed register themselves with the Exchanges than any other category of unemployed. According to the findings of the 21st Round (1966-67) of the National Sample Survey, the percentage of urban unemployed registering with the Exchanges was around 70 per cent among graduates and also among those "other than graduates having technical education" and those who had completed secondary education; it was only 36 per cent among the "literate but below secondary" and about 11 per cent among the illiterate. The educated unemployed in rural areas are of course less adequately covered by the Employment Exchanges, but the category of the "educated" itself accounts for a much smaller proportion of the labour force in the rural areas than in the urban<sup>3</sup>.

4. A serious limitation of the data supplied by the Exchanges is really that a high proportion of the educated persons in urban areas who are on the registers are already employed and are only seeking more preferred employment. In the case of engineering graduates, for instance, a number of case studies conducted over the period 1965-67 showed that, on the average, about one-half of those registered were already in employment and were seeking assistance from the Exchanges only with a view to improving their prospects<sup>4</sup>.

5. Moreover, all these percentages referred to above—particularly those relating to the educated unemployed who register themselves, and those who register but are not really unemployed have themselves been changing over time. Estimates of changes in the volume of educated unemployment over a period, arrived at by applying as correction factors percentages derived from studies relating to a particular point of time, can therefore be highly misleading.

6. Of the two sources of data, the National Sample Survey appears to be the more reliable. As mentioned elsewhere in this report, the definitions used by the NSS are open to the criticism that they treat as "gainfully employed" anyone who has worked "for however short a period" during the week preceding the date of enquiry, and would therefore tend to impart a downward bias to estimates of the unemployed. In the case of the "educated" segment of the labour force, however, this bias is likely to be less serious, since relatively few persons in the educated labour force are likely to be casually employed and the bulk of employment is apparently fairly stable.

7. According to the data collected in the 21st Round of the NSS, about one-sixth of the urban labour force was "educated" in the sense of having completed secondary or some higher course of

<sup>1</sup>See: Outline, Report of the Study Group on Educated Unemployed (Planning Commission, 1955); Educated Persons in India, 1955 (Perspective Planning Division, Planning Commission, 1959); The Pattern of Graduate Unemployment (Directorate General of Employment and Training, Ministry of Labour and Employment, 1957); Report on the Pattern of Graduate Employment (Directorate General of Employment and Training, 1963); Nature and Dimensions of Unemployment among Educated Persons in India, 1953 to 1964 (Institute of Applied Manpower Research, 1965).

<sup>2</sup>See Main Report, Chapter II—paragraphs 23-27 and Appendix III

<sup>3</sup>According to the data collected in the 19th Round (1964-65) of the National Sample Survey, based on the Integrated Household Schedule, those who had completed secondary or higher education accounted for only 1.37 per cent of the rural labour force as compared to 15.02 per cent in the urban labour force. See: The NSS Report 201 (Draft).

<sup>4</sup>Employment Outlook for Engineers, 1969-79 (Institute of Applied Manpower Research, 1969) pp. 8-9.

education. About 3½ per cent of the educated component of the labour force was recorded as unemployed. This percentage was higher than for the urban labour force as a whole (the unemployed within this total being only about 1.6 per cent), but it was significantly lower than would appear from the estimates based on the data supplied by the Employment Exchanges<sup>8</sup>.

8. The NSS has collected data in its 21st Round also on the duration of unemployment according to the educational achievement of those unemployed in the urban areas. While more than two-thirds of the unemployed among the illiterate had been unemployed for 3 months or less at the time of the survey (1966-67), only about a fifth of the unemployed who had secondary education, and a little over one-quarter of the unemployed graduates, were found to have had such a short duration of unemployment. However, only about 21 to 22 per cent of the unemployed graduates and those with secondary education were recorded as unemployed for more than a year. These data suggest that, though the period required for absorption is somewhat longer for the educated segment of the labour force, this period extends for over a year for only a little over one-fifth of the educated unemployed.

9. According to the findings of a survey on the *Employment of Matriculates* undertaken by the Directorate-General of Employment and Training in 1961 in certain selected centres, the interval between completing education and getting the first job was more than 6 months for well over 50 per cent of the matriculates and exceeded 2 years for 20 per cent of them in the majority of these centres. When the relative percentage of those with education only up to this level increases in the total labour force, one must expect some increase in the stock of educated and total unemployed even if the "waiting period" for any of the categories does not itself increase. The proportion of those with "secondary but below graduate" in the total urban labour force has in fact been rising. As will be seen from the data below, while they accounted only for about one-twelfth of the total urban labour force at the time of the 16th Round of the NSS (i.e. July, 1960—June, 1961), they formed more than one-eighth of the labour force when the 21st Round was conducted (i.e., in 1966-67).

TABLE 1

*Percentage Distribution of the Urban Labour Force by Educational Standard from Selected NSS Rounds*

Educational Standard	Percentage of the labour force		
	16th Round July, 1960— June, 1961	18th Round February, 1963—Jan- uary, 1964	21st Round July, 1966— June, 1967
1. Illiterate	42.53	39.72	37.32
2. Literate but below secondary	45.99	46.10	46.10
3. Secondary but below graduate	8.47	10.45	12.24
4. Graduate and above	2.96	3.51	4.31
5. Not recorded	0.05	0.22	0.03
Total	100.00	100.00	100.00

10. That the incidence of unemployment has been generally severe on the sub-category of those who have completed matriculation but not proceeded beyond, than on the educated labour force as a whole, is evident also from a *Sample Survey on Unemployment* conducted by the Government of Kerala in October, 1965. The unemployed among the matriculates amounted to more than 19 per cent of the total stock of matriculates in the labour force in Kerala at the time; while the corresponding percentages were only 7.4 for graduates and 5.7 for post-graduates; the percentages were still lower for those with lower educational attainments, being only 7.1 for "middle below matric", 3.8 for "literate below middle" and 2.8 for the "illiterate". (The definition of "employed" in this survey was the same as that used by the NSS, and the estimates of unemployment are therefore open to the same limitations as those mentioned earlier).

<sup>8</sup>According to the estimate, based on the Live Register data using "correction factors", by J. Krishnamurty (Appendix III) about 28 per cent of the urban unemployed were "educated" persons in December, 1968; Since about one-sixth of the urban labour force was "educated", this means that the "educated unemployment" rate would be about 75 per cent higher than the 7.5 per cent rate obtained for the entire urban labour force. This would imply a rate of educated unemployment of about 13 per cent.

11. Unemployment has been severe in recent years among also certain professional sub-groups with educational qualifications above matriculations such as engineers. According to one estimate\* based on the data supplied by the Employment Exchanges (but corrected on certain arbitrary assumptions for the proportion of engineers registered who are likely to have been in employment), over 17 per cent of the total stock of engineering graduates and diploma holders was unemployed in 1968. In the decade preceding 1965, the unemployed within this category is estimated to have been no more than 7 to 8 per cent of the total stock, and even this appears to have been largely due to the waiting period (or no more than a year) that the bulk of the new graduates and diploma-holders had to go through before securing employment. Taken together with the extent of the increase since 1965, it would appear that, while unemployment in this professional sub-group was largely of frictional nature upto then, it has since then assumed dimensions that cannot be explained wholly in these terms.

12. It would be evident from the data referred to above and the inferences drawn, that (a) more frequent surveys undertaken by the NSS, annual if possible in the urban areas, offer the best prospect of improving our knowledge about unemployment among the educated ; and (b) the estimates of such unemployment must be supplemented (as it has been in some of the NSS Surveys) by additional information such as on the waiting period for different categories of the educated unemployed. It is also essential to collect data in much greater details in order to throw more light on the trends in regard to different professional sub-groups like engineers and doctors. In the absence of such systematic investigations, the data available on educated unemployed are not now adequate for interpretative or policy purposes.

13. We would also like to point out that projections of the supply and the demand for educated personnel can be attempted on a firmer foundation than for the labour force as a whole. On the supply side, the streams from which additions to the educated labour force are likely to come can be identified much in advance (5 to 10 years ahead), since the individuals concerned would already have entered the earlier stages of the educational process. What is essential are accurate data on enrolments in each year of schooling (which at the moment are not available) and of the rate and incidence of drop-outs (on which again very little dependable information is now available). Estimates can then be made on different assumptions about future enrolments and drop-outs, and they would give an indication of the range within which the additions to the educated labour force are likely to take place in the future. In the case of certain kinds of skilled personnel, such as engineers, data about the actual and planned facilities for providing the necessary training would by themselves make possible such projections concerning supply in the future. On the demand side, the absorption of the educated labour force takes place mainly in services and in manufacturing, mining, and construction activity. More information about such absorption classified in detail according to industry and occupation, and used together with estimates of the likely growth of output in different sectors of the economy, should make it possible to attempt rough estimates of the growth of demand for educated personnel as a whole as well as for labour trained in critical skills. This is in fact an area in which advance planning can help a great deal to overcome the problems arising from unemployment among the educated as well as from shortages of skilled personnel and in which adequate investment for collection of the necessary data would therefore pay high dividends.

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\*Employment Outlook for Engineers, 1969—79 op. cit.

It has been pointed out that the enrolments at each year of schooling are subject to two types of defects. First, especially for the lower classes, enrolments are probably overstated and drop-outs are not fully taken into account. Secondly, the number of years of schooling varies from State to State and adequate corrections for this have not been made in the existing projections. For a discussion of this problem see Amartya Sen, "The Crisis in Indian Education" Lal Bahadur Shastri Memorial Lectures March, 1970 (mimeographed) pages 11 and 12.





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## APPENDIX V

## ESTIMATES OF PARTICIPATION RATES AND LABOUR FORCE, INCLUDING AND EXCLUDING UNPAID FAMILY WORKERS, FOR INDIA, 1961—1981

By  
Pravin Visaria

## A. Summary :

The absence of participation rates by five-year age groups for labour force projections for India has been noted by many analysts. The present study attempts to overcome this limitation. It provides estimates of labour force participation rates, including and excluding unpaid family workers, by sex, five-year age-groups and rural urban residence. The estimates for the country as a whole are then used to make projections of the labour force which distinguish the unpaid family workers from others. The main points of the argument are summarized below. (A reader who is not interested in the details of estimation can proceed, after this summary, directly to Section VII or Tables 10—12 which show the labour force projections).

2. First, we have estimated worker rates for India, by five-year age groups, on the basis of special tables compiled from the 1961 census data for Maharashtra State. The very close similarity of the labour force participation rates, available for broad age-groups, for males both in rural and urban areas of Maharashtra and India forms the keystone of this adjustment. Next, an attempt has been made to estimate the five-year age composition of the unemployed enumerated by 1961 Census. Since the number of unemployed recorded by the 1961 Census was small, relative to the number of workers, the estimates of the unemployed by detailed age groups are not of great consequence for calculating participation rates but they are necessary in principle. The estimates draw on the data available from the various Rounds of the NSS, which show the distribution of the sample population of each age-group according to both labour force and employment status, i.e., as (i) employed, (ii) unemployed and (iii) outside the labour force. Due care has been taken to reconcile the implicit incidence of unemployment (unemployed as per cent of the labour force or as per cent of the gainfully employed) with its presumed likely trend over age.

3. The workers and unemployed together form the labour force. The estimates of workers and the unemployed in each age-group, obtained by the procedures outlined above, provide the basis of labour force participation rates by sex, and rural-urban residence according to the 1961 Census. A further refinement is considered necessary to distinguish the unpaid family workers from other members of the labour force.

4. The rationale of this separation of unpaid family workers lies in the fact that a very large majority of them, particularly females, are unlikely to be available for paid employment outside their family enterprises. The success of efforts at creating additional employment opportunities may, with the passage of time, lead to change in the status of the degree of attachment to the labour force on the part of some of the unpaid family workers. But this is unlikely to happen during the next decade or so.

5. To estimate participation rates excluding unpaid family workers, we have relied entirely on the NSS data on the distribution of labour force by status. Despite the changes in the concepts and the timing of the surveys, the proportion of unpaid family workers in the labour force shows a remarkable steadiness from Round to Round. The estimates based on the NSS data are, therefore, assumed to be applicable to the 1961 Census data as well. The future trends in the status distribution of the labour force are likely to be influenced by several complex forces. But it is felt that as in Japan, unpaid family workers will continue to form an important segment of the Indian labour force for a fairly long period of time.

6. As regards the changes in participation rates during 1961—81, a review of the relevant factors that can be quantified suggests that the rates in ages 10—19 are particularly likely to decline. Accordingly, two projections have been made. One of them assumes a continuation of the participation rates at the 1961 level ; the other envisages (i) a 75 per cent decline by 1981 in the rates for the age-groups 10—14 and (ii) a decline in the rate for males and females aged 15—19 of the order of 25 and 10 per cent, respectively. The projections are presented and summarized in Tables 10—12.

7. On the basis of the labour force projections by five-year age-groups, estimates have been made of the number of entries into and withdrawals from the labour force over each of the four

quinquennial during 1961—1981. The usual figures of net additions into the labour force overlook this important distinction which seems to be crucial for employment planning. Approximately three-fifths to three-fourths of the urban unemployed enumerated by 1961 Census or recorded by the NSS or registered with the Employment Exchanges tend to be concentrated in the ages 16 to 26 or 15 to 24. Many of these unemployed seem to be the new entrants into the labour force. According to our projections, the number of new entrants into the labour force will exceed the net additions by more than 40 per cent. Planning authorities seeking to create employment opportunities or provide vocational orientation to the educational system need to pay special attention to the number of new entrants into the labour force.

### *The Background :*

8. One of the crucial variables in labour force projections happens to be the sex-age specific labour force participation or economic activity rates. These rates are usually based on data collected in censuses or large surveys when an attempt is made to obtain an inventory of the number of persons in the labour force, i.e., those who undertake some activity to supply goods and services to the society (usually called the employed or workers) and also those desiring or seeking to do so but unsuccessful in their attempts (the unemployed seeking work, including those doing so for the first time or the new entrants into the labour force). In most societies, the extent of labour force participation is influenced by the age of the individual, hence the need to relate the number of persons in the labour force to the total population of each age group.

9. All Indian censuses since 1867—72 have attempted to collect information on the occupation or the means of livelihood of the population. However, the 1951 Census was the first to tabulate an approximately ten per cent sample of the non-displaced population and all the displaced persons by eight livelihood classes as well as ten-year age groups for ages 5—74 and the three other age groups of 0, 1 to 4 and 75 and over. Unfortunately, the economically inactive or the “non-earning dependents” were lumped with the self-supporting persons and the earning dependents in the age-group. As a result, the data do not permit estimates of age-specific economic activity rates or worker-population ratio<sup>1</sup>. As a supplement to the basic tabulation programme, some tables were subsequently prepared from an approximately 2 per cent sample of the rural population and a 10 per cent sample of the urban population (excluding displaced persons) of all or selected areas of the three States : Mysore, Uttar Pradesh and West Bengal. These tables provide some idea of the sex-age-specific worker rates and the broad sectoral distribution of workers. Unfortunately, the apparent exclusion of certain categories of workers such as the unpaid family workers has affected the rates for Mysore and West Bengal and has vitiated their usefulness.

10. The 1961 Census of India has, therefore, been the first to classify the entire population into workers and non-workers by sex and broad age groups of 0—14, 15—34, 35—59 and 60 and over. Among the non-workers, the unemployed seeking work for the first time and those seeking work not for the first time have been distinguished, at least for the four broad age-groups<sup>2</sup>. The worker rates and the labour force participation rates based on these data are shown below in Table 1.

11. The participation rates by broad age groups do not provide a complete view of the age profile of participation in economic activity, particularly regarding the entries into and retirements or withdrawals from the labour force. Information on the latter is important also for manpower planning, especially for estimating the magnitude of requirements of vocational training and creating suitable employment opportunities. It is necessary, therefore, to estimate participation rates for five year age groups. For this purpose we shall attempt to estimate the five-year age distribution of the workers and the unemployed persons enumerated by the 1961 Census and classified as noted above, only by broad age groups.

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<sup>1</sup>The term ‘Worker Population Ratios’ or ‘Worker Rates’ would be almost equivalent to ‘labour force participation rates’ if the workers include unemployed with some work experience, classified according to their last activity or occupation prior to unemployment. Only the unemployed seeking work for the first time would be left out with such an approach. Ordinarily, we may use the term ‘worker rate’ or ‘worker population ratio’ when the unemployed are not taken into account for calculating the ratio.

<sup>2</sup>The data on the unemployed will be discussed below in Section III.

TABLE 1

*The Worker Rates and Labour Force Participation Rates by Sex, Broad Age Groups and Rural-Urban Residence for India, 1961 (Census (Percent))*

Age	Worker Rate		Labour Force Participation Rate	
	Males	Females	Males	Females
	<b>India</b>			
All Ages	57.12	27.96	57.69	28.02
0—14	9.39	6.60	9.44	6.61
15—34	88.06	43.65	89.50	43.78
35—59	96.67	47.59	97.06	47.62
60+	76.61	22.38	76.82	22.41
Age not stated	29.67	12.58	29.90	12.69
	<b>Rural India</b>			
All Ages	58.22	31.42	58.51	31.45
0—14	10.61	7.63	10.65	7.64
15—34	91.13	49.78	91.91	49.87
35—59	97.47	52.29	97.64	52.31
60+	79.89	24.31	79.99	24.34
Age not stated	29.97	13.45	30.16	13.56
	<b>Urban India</b>			
All Ages	52.40	11.09	54.15	11.25
0—14	3.55	1.57	3.66	1.57
15—34	76.92	15.79	80.76	16.18
35—59	93.31	22.88	94.65	22.99
60+	58.44	11.41	59.25	11.48
Age not stated	27.43	6.21	27.95	6.39

SOURCE : Census of India, 1961, Vol. I, India, Part II-B (i) and II-B (iii) General Economic Tables, pp. 86 and 593 respectively.

## II

### *The Five-Year Age Distribution of the Workers Enumerated by the 1961 Census :*

12. Worker rates or worker-population ratios by five year age groups, sex and rural-urban residence are known for Maharashtra State, for which two special tables have been compiled from the 1961 Census records under a co-operative project of the Department of Economics, University of Bombay, Office of Registrar General, India, and the Office of the Superintendent of Census Operations, Maharashtra State. (See Table 2). Also, the labour force participation rates for broad age groups reported by the 1961 Census for Maharashtra and India, happen to be very close, particularly for males, (See Table 3). It is, therefore, assumed that the age-pattern of worker rates reported for Maharashtra is valid for the country. While Maharashtra accounts for less than 10 per cent of the total population of India in 1961, the age profile reported in Table 2 is broadly similar to the pattern of labour force participation reported in the various Rounds of the National Sample Survey<sup>a</sup>. One can, therefore, adjust the level of the worker rates for Maharashtra so that taking into account the actual reported age distribution of the population of India, the estimated rates agree with the number of enumerated workers in each broad age-group.

<sup>a</sup> The NSS used rather non-conventional age-groups in its reports on the data collected up to the fifteenth Round (1959-60).

TABLE 2

*Worker Population Ratios by Sex, Age and Rural-Urban Residence in Maharashtra 1961 Census (Percent)*

Age	Rural Areas		Urban Areas		All Areas	
	Males	Females	Males	Females	Males	Females
All ages	58.07	46.74	54.84	13.45	57.09	38.10
5—9	3.00	2.92	0.43	0.24	2.34	2.25
10—14	34.61	39.60	8.93	5.22	27.48	30.31
15—19	10.65	11.31	2.85	1.56	8.62	8.84
20—24	78.37	72.74	40.58	13.34	65.49	56.22
25—29	96.15	77.14	79.65	18.35	89.65	60.21
30—34	98.72	79.36	94.22	20.35	97.13	62.68
35—39	98.94	80.72	96.29	24.25	98.00	64.96
40—44	92.87	77.42	77.85	18.92	87.45	60.90
45—49	98.96	81.75	96.76	27.41	98.21	67.66
50—54	98.72	80.24	97.17	30.94	97.86	67.85
55—59	98.51	76.62	95.01	29.50	97.49	65.64
60—64	97.56	67.69	91.42	27.35	95.75	57.82
65—69	95.55	57.07	80.49	21.89	91.75	49.38
70+	98.16	75.24	93.98	28.14	96.86	63.68
60—64	88.70	40.80	68.51	18.49	83.56	35.67
65—69	81.99	31.59	57.07	13.68	76.40	27.91
70+	60.10	15.80	41.00	7.76	55.94	14.03
60+	77.50	29.84	57.69	13.72	72.82	26.28

NOTE.—It is assumed that all workers in the age group 0—9 were aged 5—9.

SOURCE : Previn Visaria, The Working Force of Maharashtra State in India, 1961, Table 2.1.

TABLE 3

*Labour Force Participation Rates (workers and Unemployed per 1,000 Population) by Sex, Age and Rural-Urban Residence in Maharashtra and India, 1961 Census*

Age		Maharashtra			India		
		Persons	Males	Females	Persons	Males	Females
All Ages	..	484	579	382	433	577	280
0—14	..	88	87	88	81	94	66
15—34	..	756	894	610	670	895	438
35—59	..	819	974	637	740	971	476
60+	..	494	732	264	496	768	224
Rural Areas							
All Ages	..	525	583	468	452	585	315
0—14	..	109	107	113	92	106	76
15—34	..	852	935	774	707	919	499
35—59	..	871	983	753	761	976	523
60+	..	531	776	299	521	800	243
Urban Areas							
All Ages	..	377	570	136	345	542	113
0—14	..	23	30	16	27	37	16
15—34	..	554	823	193	518	803	162
35—59	..	685	956	283	645	947	230
60+	..	367	588	139	356	592	115

SOURCE : Census of India, 1961, Vol. I, India, Parts II-B(i) and II-B(iii) ; Vol. X, Maharashtra, Parts II-B (i) and II-B(ii).

13. Given the difference in the percentage of urban population in Maharashtra (28.2) and India (18.0), a separate adjustment for rural and urban rates seems advisable. The adjusted rates can be combined to obtain all India estimates by taking into account the rural-urban distribution of the population of each sex-age group.

14. The results obtained by the above procedure are shown in Table 4<sup>4</sup>. These estimates will be reviewed later in the light of the results of the research currently on hand to obtain Maharashtra-type tables for other States of India. At the moment, the estimated worker rates, applied to the available data on the 1961 population by sex and five year age groups, provide the figures on workers shown in Table 5. As noted in the discussion above, these figures are consistent with the published data for broad age groups. To obtain age specific labour force participation rates, we need figures of both workers and the unemployed by the same age classification. We shall now estimate the age composition of the unemployed enumerated by the 1961 Census.

<sup>4</sup>. An interpolation of the adjustment factors for broad age groups has helped to obtain a smooth trend in the worker rates. The rates for age groups 70—74 and 75 and over were obtained by extrapolation. Thanks are due to Dr. John D. Durand of the Population Studies Centre of the University of Pennsylvania for his suggestions on this point.

## III

*The Five Year Age Distribution of the Unemployed Enumerated by the 1961 Census.*

15. As noted earlier, the published 1961 census data distinguish between the unemployed seeking work for the first time and not for the first time. While the data on the rural unemployed have been tabulated only by four broad age groups, the urban unemployed are shown in finer age groups. The age groups used for the two categories of urban unemployed (new entrants and others) are, however, different. The available data are summarized in Table 6<sup>a</sup>. The reported existence of some unemployed seeking work for the first time in the age groups 35—59 and 60 and over is somewhat perplexing. These persons might perhaps be former employers or self-employed workers who were looking for work as employees. But the possibility of errors in recording the information or in tabulation cannot be ruled out. However, in comparison with the number of workers, the number of unemployed enumerated by the 1961 Census is small; and except in the young age groups of 15—19 and 20—24, the difference between the worker rates and the labour force participation rate is unlikely to exceed one percentage point. We shall, therefore, accept the reported data on the age distribution of the unemployed as broadly correct for estimating the number of unemployed in each five year age group.

TABLE 4

*Estimates of Sex-Age-specific Worker Rates, by Rural-Urban Residence, for India, 1961. Based on the 1961 Census Data for Maharashtra (Per Cent)*

Age	India		Rural India		Urban India	
	Males	Females	Males	Females	Males	Females
All Ages	57.12	27.96	58.22	31.42	52.40	11.09
5—9	2.51	1.69	2.91	1.98	0.54	0.24
10—14	29.92	22.78	34.14	26.71	11.11	5.22
15—19	69.43	40.56	77.07	47.17	40.70	11.43
20—24	90.95	43.07	94.41	49.26	79.60	15.55
25—29	96.27	44.76	96.86	50.76	94.03	17.03
30—34	96.94	46.65	97.21	52.27	95.93	20.00
35—39	97.31	49.11	97.60	54.50	96.20	22.38
40—44	97.26	50.10	97.70	55.10	95.54	25.14
45—49	97.07	49.33	97.68	53.92	94.37	23.94
50—54	96.34	44.95	97.52	49.20	90.89	22.17
55—59	93.53	39.16	96.18	42.86	80.38	17.77
60—64	87.25	29.69	90.64	32.34	69.34	15.18
65—69	80.48	23.73	84.53	25.85	58.16	11.31
70—74	69.44	15.33	72.98	16.43	48.52	8.65
75+	49.44	9.66	51.80	10.58	27.43	6.21

<sup>a</sup> One can appreciate the lumping together of the unemployed seeking work for the first time and aged 35—59 because of their small number. However, the use of identical age groups would help analytical studies and the need for greater uniformity in the tabulation plan cannot be over-emphasized.

TABLE 5

*Estimates of workers in India at the Time of the 1961 Census, by Sex, Five-Year Age Groups and Rural-Urban Residence. (Based on the Application of the Adjusted Maharashtra Data to Population Enumerated by the 1961 Census)*

Age	India		Rural India		Urban India	
	Males	Females	Males	Females	Males	Females
All Ages	129,256,407	159,552,096	106,836,515	59,549,370	22,419,892	4,010,042
5—9	830,526	533,131	800,053	520,405	30,473	12,726
10—14	7,866,448	5,250,922	7,331,011	5,031,133	535,437	219,789
15—19	12,921,566	7,014,662	11,331,364	6,648,804	1,590,202	365,858
20—24	16,562,526	8,246,638	13,181,563	7,699,724	3,380,963	546,914
25—29	17,852,311	8,083,889	14,211,130	7,536,833	3,641,181	547,056
30—34	15,507,803	6,934,771	12,281,766	6,417,376	3,226,037	517,395
35—39	13,246,184	5,829,169	10,553,053	5,383,682	2,693,131	445,487
40—44	11,762,644	5,401,371	9,416,591	4,961,229	2,346,053	440,142
45—49	9,457,635	4,108,147	7,782,172	3,802,431	1,675,463	305,716
50—54	8,802,792	3,589,530	7,324,556	3,311,354	1,478,236	278,176
55—59	4,944,566	1,782,552	4,229,960	1,663,290	714,606	119,262
60—64	4,983,057	1,644,045	4,353,638	1,514,655	629,419	129,390
65—69	1,991,483	564,897	1,770,780	525,580	220,703	39,317
70—74	1,500,671	347,489	1,349,073	319,794	151,598	27,695
75+	998,055	210,595	894,699	196,087	103,356	14,508
Unknown	28,140	10,288	25,106	9,677	3,034	611

16. Fortunately the National Sample Survey data include a classification of the population of each age group into (i) working or gainfully employed, (ii) unemployed and (iii) outside the labour force. In fact, finer distinctions are made for each of these categories. From these data, one can obtain some idea of the strength of the unemployed in each of the two categories (new entrants and others), relative to the employed or workers in each sex-age-residence group. For this purpose, the ratios of unemployed to the gainfully employed were worked out from various rounds of the NSS. On grounds of the proximity of the timing of the N.S.S. rounds to the 1961 Census inter-Round comparability of the concepts used and the availability of the relevant information, an attempt was made to use the data from the 16th and the 17th Rounds (1960-61 and 1961-62) for rural India and the 14th and the 15th Rounds (1958-59 and 1959-60) for urban India. But the ratios of unemployed to the urban gainfully employed from the 14th and the 15th Rounds showed erratic fluctuations over age. Therefore, it was necessary to rely primarily on the 21st Round data (1966-67) for urban India.<sup>a</sup>

<sup>a</sup> The published Tables in the NSS reports for the 16th, 17th, 18th and the 19th Rounds in urban India do not provide separate age distributions of the new entrants and the other unemployed.



TABLE 6

*The 1961 Census Data on the Unemployed in Urban and Rural India*

Age	Unemployed seeking work for the first time		Unemployed seeking work not for the first time	
	Male	Female	Male	Female
<b>Urban India</b>				
10—14*	13,567	350	5,371	222
15—19	147,133	13,587	47,130	2,760
20—24	160,906	15,412	69,093	3,730
25—29	61,469	5,589	76,203	3,902
30—34	28,454	2,683		
35—44	34,368	3,252	49,086	2,598
45—59			44,498	2,070
60+	1,913	217	13,284	947
Age not stated	30	6	28	11
All Ages	447,840	41,096	304,693	16,240
<b>Rural India</b>				
10—14*	20,058	4,138	8,054	1,509
15—34	320,079	37,973	115,027	8,484
35—59	21,673	3,357	45,842	4,027
60+	1,614	747	8,600	2,402
Age not stated	74	16	87	59
All Ages	363,498	46,231	177,610	16,481

SOURCE.—Census of India, 1961, Vol. I, India Part-II-B(iii), General Economic Tables, Tables B-VIII and B-IX, pp. 540—543 ; 592-593.

NOTE.—\*All unemployed in ages 0—14 have been assumed to be aged 10—14.

17. Some interpolation and extrapolation of the NSS-based ratios was necessary to obtain the ratios appropriate for five year age groups. For this purpose, the ratios calculated from the NSS data were plotted on graphs and some free-hand smoothing of the resulting curves was made to conform to the presumption that the ratio of the unemployed new entrants to the gainfully employed would decline steadily with age<sup>7</sup>. Also, the NSS data for rural females showed a rise in the ratio of unemployed from ages 40—49 to 50—59, followed by a sharp decline in the ratio

Census (Table 5). On this assumption, one can estimate the proportionate age distribution of the "expected" unemployed, within each broad age group for which the 1961 Census figures for the unemployed are available. The proportions can then be used to estimate the number of unemployed in each five-year age group. In the results of this exercise, the number of rural unemployed females seeking work not for the first time and aged 60—64 was seen to be higher than the corresponding number for any of five year age group between 25 and 59. The figures of unemployed in ages 45 and over were, therefore, adjusted once again to indicate a smooth rise in the ratio of all unemployed to the gainfully employed rural females. The results of this elaborate effort have yielded the five-year age distribution of the unemployed enumerated by the 1961 Census, shown in Table 7.

19. The workers and the unemployed together constitute the economically active population or the labour force. By relating the labour force to the population in each age group one obtains the participation rates. The figures shown in Tables 5 and 7 are adequate to arrive at rural-urban estimates of the labour force participation rates based on the 1961 Census. However before presenting our estimates of participation rates a reference may be made to the relevance of the status classification of the economically active to employment planning and the importance of separating the unpaid family workers from the other members of the labour force.

TABLE 7

*The Estimated Age composition of the Unemployed Enumerated in Rural and Urban Areas of India by the 1961 Census*

Age	URBAN AREAS				RURAL AREAS			
	Unemployed seeking work for the first time		Unemployed seeking work not for the first time		Unemployed seeking work for the first time		Unemployed Seeking work not for the first time	
	Males	Females	Males	Females	Males	Females	Males	Females
10—14	13,567	350	5,371	222	20,058	4,138	8,054	1,509
15—19	147,133	13,587	47,310	2,760	146,740	10,804	27,376	2,444
20—24	160,906	15,412	69,093	3,730	113,164	15,637	31,667	2,452
25—29	61,469	5,589	47,581	2,114	45,003	7,435	30,954	1,985
30—34	28,454	2,683	28,622	1,788	15,172	4,097	25,030	1,603
35—39	15,410	1,369	27,665	1,432	9,314	1,162	13,386	1,101
40—44	9,393	972	21,421	1,166	4,548	944	11,337	1,023
45—49	4,502	499	18,916	970	3,325	627	8,875	930
50—54	3,554	321	17,109	809	3,095	441	7,921	1,084
55—59	1,509	91	8,473	291	1,391	182	4,323	754
60—64	1,334	197	9,653	641	1,122	493	4,650	625
65—69	360	20	2,396	159	299	148	1,803	358
70—74	162	0	1,055	97	134	76	1,318	304
75+	57	0	270	50	59	31	829	250
Age not stated	30	6	28	11	74	16	87	59
10 and over	447,840	41,096	304,693	16,240	363,498	46,231	177,610	16,481

*Note.*—All unemployed in ages 0—14 have been assumed to be aged 10—14.

*The Distribution of Labour Force According to Status*

20. The status classification of the labour force shows the position of the individual worker in relation to other workers, if any, in an enterprise. The major categories used to describe the status of the economically active are : employers, employees, own-account (or self-employed or single) workers and the unpaid family workers.<sup>9</sup> While the identification of the status of an economically active person appears to be an easy task in practice one might encounter some difficulties. For instance it is suggested that in some parts of India the ownership of family assets like land is assigned to children right from the time of their birth or at least while they are very young. In such areas the young workers might be reported as owner-operators or even employers. In other areas members of a joint family might acquire property rights only on the death of the head of the family or long after they become mature adults ; if so many adult workers might continue to be unpaid family workers. Thus the classification of workers by status might be affected by local customs. While the point is certainly valid our interest is not so much in the *de jure* or the legal status but in the *de facto* relationships in terms of the recognised roles in decision-making. Moreover the status classification of female workers is unlikely to be affected significantly by different customs regarding the division of hereditary property.

21. The completeness of enumeration of unpaid family workers seems to be particularly subject to variations over time and space and among different strata of society<sup>10</sup>. Within India for example the labour force participation rates for females in rural Maharashtra reported by the 1961 Census were significantly higher than the rates for women in rural India as a whole. The 16th and the 17th Rounds of the NSS also reported females participation rates for rural Maharashtra (39.83 and 33.70 per cent respectively) to be much higher than those in rural India (27.72 and 22.16 per cent, respectively)<sup>11</sup>. Admittedly the NSS sample for rural Maharashtra tends to be relatively small and the rates are likely to be subject to a larger sampling error. However the differences in participation rates of rural Maharashtra women reported by the NSS, are consistent with those indicated by the 1961 census. And it is an interesting fact that the proportion of unpaid family workers among the rural females of Maharashtra in the labour force reported by the 16th and the 17th Rounds of the NSS (51.49 and 55.58 per cent respectively) was also much higher than the corresponding proportion in rural India as a whole (42.37 and 43.82 per cent respectively). These data suggest the possibility that in India also the Inter-State and inter-district differences in female participation rates might be due to differentials in the reporting of unpaid family workers among females as economically active<sup>12</sup>.

22. The available information does not permit an evaluation of the validity of apparent regional differences in the extent of unpaid family work by females. However the basic problem arises from the fact that most of the unpaid family workers fulfil dual roles ; they engage not only in economic activities but also in housework or studies which are recognised as non-economic activity. The quantum of work performed by them probably tends to vary according to the exigencies of the demand for their labour in the family enterprise.

23. The NSS data from the 14th and the 15th Rounds suggest that in rural India the proportion of females in the rural labour force and particularly of females employed as unpaid family workers falls steadily from a peak during July-August to a low during May-June. This decline is accompanied by a rise in the proportion of females classified as house-workers (and as unemployed)<sup>13</sup>. These data illustrate the seasonal fluctuations in the size and composition of

<sup>9</sup>In some countries, the members of producers co-operatives form a fifth status category because they cannot be classified in any of the four categories noted above. Usually the status classification is restricted to the employed members of the labour force only. The unemployed may be considered a separate category.

<sup>10</sup>United Nations, Demographic Aspects of Manpower, Report 1, Sex and Age Patterns of Participation in Economic Activities, New York, 1962, pp. 2, 7-10.

<sup>11</sup>Thanks are due to Shri S.M. Vidhwans, Director of the Bureau of Economics and Statistics, Maharashtra State, for making available the State tables on the subject.

<sup>12</sup>Another factor relevant to the differentials in the female participation rates seems to be the proportion of scheduled castes and tribes in the population. See : Pravin M. Visaria, "Employment and Unemployment in India : A Review of Selected Statistics" (cyclostyped), pp. 10-13.

<sup>13</sup>Sudhir Bhattacharyya and Pravin Visaria, "Unpaid Family Workers in the Indian Labour Force".

the rural labour force. It is not possible to identify the proportion of female unpaid family workers who report themselves as unemployed during the slack seasons. Presumably many of them withdraw from the labour force when the demand for their labour declines. Quite probably a majority of the female unpaid family workers essentially seek to supplement the efforts of full-time workers in their families to meet the peak demand for labour in agriculture or similar family enterprises.

24. The United Nations Population Commission has recommended the use of some criteria in terms of a specified amount of time or a minimum proportion of the normal full-time workload ("wherever expedient, . . . approximately one-third") to exclude persons contributing only nominal work from the ranks of the economically active <sup>13</sup>. However, in the prevailing socio-economic conditions in many developing countries, the concept of time is too vague to permit an inquiry into the hours or days worked in any census or a similar large-scale survey. Besides, during the lean season, many farmers probably go to their farms as a matter of daily routine, without any clear motive. The distinction between an economic and a non-economic activity also tends to be rather narrow. As a result, the application of a criterion in terms of quantum of work to the enumeration of the unpaid family workers becomes a difficult task.

25. The relevance of the status classification to employment planning lies in the possibility that the status of a worker tends to suggest the degree of his attachment to the labour force. It appears that the rural females or old men working as unpaid family workers are unlikely to be able to take up any full-time jobs even if the appropriate opportunities are created through public works projects or similar programmes. The incompatibility of the roles of child-bearing and house-hold management with full-time work for many, if not most, of our women is obvious. There is some preliminary indication that farmers prefer to work on their family farms and may be unwilling to work elsewhere, partly, perhaps due to considerations of social status <sup>14</sup>. More detailed inquiries are necessary to ascertain whether the apparent withdrawal of the female unpaid family workers from the labour force is due to the pressure of other obligations or the inadequacy of demand for labour. Admittedly, the responses to any questions on this subject might be conditioned by the current situation which perhaps reflects an institutional adjustment to the seasonal fluctuations in demand for labour. Changes in the level and pattern of demand for labour in rural India can lead to changes in the status distribution of workers.

26. Nowever, the data from the 1960 Census of Japan suggest a very high proportion of family workers (more than 50 per cent in all age groups above 20) among the gainfully employed females in rural areas. The corresponding proportion among the urban female workers exceeded 30 per cent in all age groups above 25. The demographic situation and the consequent trends in labour force in Japan since 1950 are not comparable with the expected developments in India during 1961-81. However, it seems quite likely that the unpaid family workers will continue to form an important segment of the Indian Labour force for years to come, particularly over the next 20 to 25 years. It would, therefore, be useful to distinguish between the unpaid family workers and others in our projections of the labour force.

27. For this purpose, it is necessary to know the importance of unpaid family workers in the labour force in different sex-age-groups. The two sources of data on this subject are the censuses and the various rounds of the National Sample Survey. The 1951 Census restricted the collection of data on this subject (called the "secondary economic status") to the "self supporting" persons (i.e. those who considered their income to be equal to or greater than the cost of maintaining themselves). As a result, the status data were not collected for nearly 38 million persons or roughly 27 per cent of the enumerated working force of India in 1951. Secondly, the classification by status did not distinguish between the "unpaid family workers" and others. Even if the residual category of "others" (i.e. other than employers, employees and independent workers) is assumed to include primarily the "unpaid family workers", the non-availability of such classification for the earning dependents, who would include a majority of unpaid family helpers, seriously limits the usefulness of the 1951 census data on this subject. The 1961 Census has followed the international recommendations and has distinguished between "employers", "employees", "single workers" and "family workers" but the classification was restricted to only the non-farm workers (other than cultivators and agricultural labourers). The unpaid family work is likely to be an important

<sup>13</sup>International Labour Office, *The International Standardization of Labour Statistics*, Geneva, 1959, pp. 38-39.

<sup>14</sup>Pravin Visaria, "The Farmers' Preference for work on Family Farms".

feature of work by many of the cultivators, and therefore, this omission is regrettable. One hopes this deficiency will be corrected in the 1971 Census. For the present, however, we must rely on the NSS data.

28. Fortunately, the NSS has collected (and tabulated) information on the status of the gainfully employed (or working) population by sex and age for a number of Rounds.<sup>15</sup> There have been some changes in nomenclature but one can assume equivalence between the terms "unpaid family enterprise workers", "dependent working members of household", and "unpaid helpers". The available NSS data have been summarised in Tables 1 and 2 in Annexure I. Given the differences among various Rounds in regard to the timing and duration of the survey, the reference period, the sample size, age classes and the possibilities of sampling error, the data seem to be reasonably consistent. Except in the 19th Round data based on the Integrated Household Schedule, in rural India the unpaid family workers have been reported to form between 15 to 17 per cent of the male labour force and between 41 and 49 per cent of the female labour force. In urban India, they formed about 6 to 8 per cent of the male labour force but between 22 to 28 per cent of female labour force.

29. For labour force projections, we need estimates of the proportion of unpaid family workers in the labour force in each age group. To arrive at these estimates it was decided to average the data from the 16th and the 17th Rounds for rural India and from the 14th and the 15th Rounds for urban India. Each of these Rounds had used the reference period of one week. The sample size for survey in rural India was the highest during the 17th Round. Also these Rounds were the closest to the date of the 1961 Census. However, the curves of the average proportion of unpaid family workers in the rural and urban labour force had to be smoothed with the necessary interpolation and extrapolation, we could estimate the percentages of unpaid family workers in the rural and urban labour force by sex and age shown in Table 8 below.<sup>16</sup>

30. The discussion above has been centred on the unpaid family workers. It would be useful also to make separate estimates of the self-employed persons who would include both cultivators with medium or large land holdings and those working in the non-governmental tertiary sector. The self-employed persons are unlikely to be reported as unemployed even if their productivity or income is very low. Even in terms of the intensity of employment or hours of work, they might report low incidence of idle labour time. The nature of their problem is much different from that of the employees, who, in rural areas, would be mainly the agricultural labourers. The problem of unemployment, whether seasonal or chronic, is likely to be encountered primarily by the agricultural labourers and the small landholders who undertake secondary occupations to supplement their incomes. The 1961 census data for rural Maharashtra show that the proportion of agricultural labourers among workers rises steadily with a decline in age. A preliminary examination of the NSS data for rural India shows a steady rise in the proportion of employees in the labour force after age 25. Since the subject needs further investigation, it has been decided to postpone the estimates of the proportion of employees in the labour force by sex and age.

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<sup>15</sup>The NSS labels the status classification as "employment status" which ordinarily connotes the distinction between the employed and the unemployed. If the term "status" is objected to, one might adopt the term "class of worker" used by the 1961 Census.

<sup>16</sup>Before arriving at our estimates, we have examined the similar data for Japan (1960 Census), Turkey (1955 Census), Morocco (1960 Census) and Iran (1966 Census) to ascertain the age-specific incidence of unpaid family workers. The data for these countries indicate an age profile broadly similar to that reported by the NSS for India.

TABLE 8

*The Percentage of Unpaid Family Workers in the Labour Force in Rural and Urban India, by Sex and Age (Estimated from the NSS)*

Age	Rural India*		Urban India**	
	Males	Females	Males	Females
10—14	47.5	55.5	34.5	52.5
15—19	36.0	49.7	22.0	41.5
20—24	26.0	45.5	13.5	31.7
25—29	17.0	42.5	8.4	26.1
30—34	10.7	40.3	4.3	22.1
35—39	6.3	38.6	2.5	18.8
40—44	3.7	37.0	1.6	16.4
45—49	2.5	35.6	1.1	15.4
50—54	2.2	34.5	1.2	15.0
55—59	2.4	33.6	1.5	15.1
60—64	2.7	33.0	2.1	15.3
65—69	3.3	32.6	3.5	15.5
70—74	4.2	32.4	5.5	16.0
75+	5.6	32.2	8.8	18.0

\*Based on the NSS data from the 16th and the 17th Rounds (1960-61 and 1961-62, respectively).

\*\*Based on the NSS data from the 14th and the 15th Rounds (1958-59 and 1959-60, respectively).

## V

## ESTIMATES OF LABOUR FORCE PARTICIPATION RATES

31. The discussion in Sections II and III above has provided us with the information to estimate labour force participation rates by sex, five year age groups and rural urban residence, on the basis of the 1961 Census. The discussion in Section IV above has led to the estimates of the proportion of unpaid family workers in the labour force of each sex age group on the basis of the NSS data. These latter estimates are assumed to be applicable also to the labour force enumerated by the 1961 Census. On this basis, we have arrived at labour force participation rates including and excluding unpaid family workers, which are shown in Table 9 and Figure 1 below.

32. Figure 1 shows very clearly that as might be expected from the data presented in Table 8, the exclusion of unpaid family workers makes an appreciable difference to the participation rates for rural females and to those for young rural males. It also changes the shape of the curve, particularly for males both in rural and urban areas and to a less extent for rural females as well (Slight irregularities, evident in the curves for females, are presumably due to errors of age reporting.)

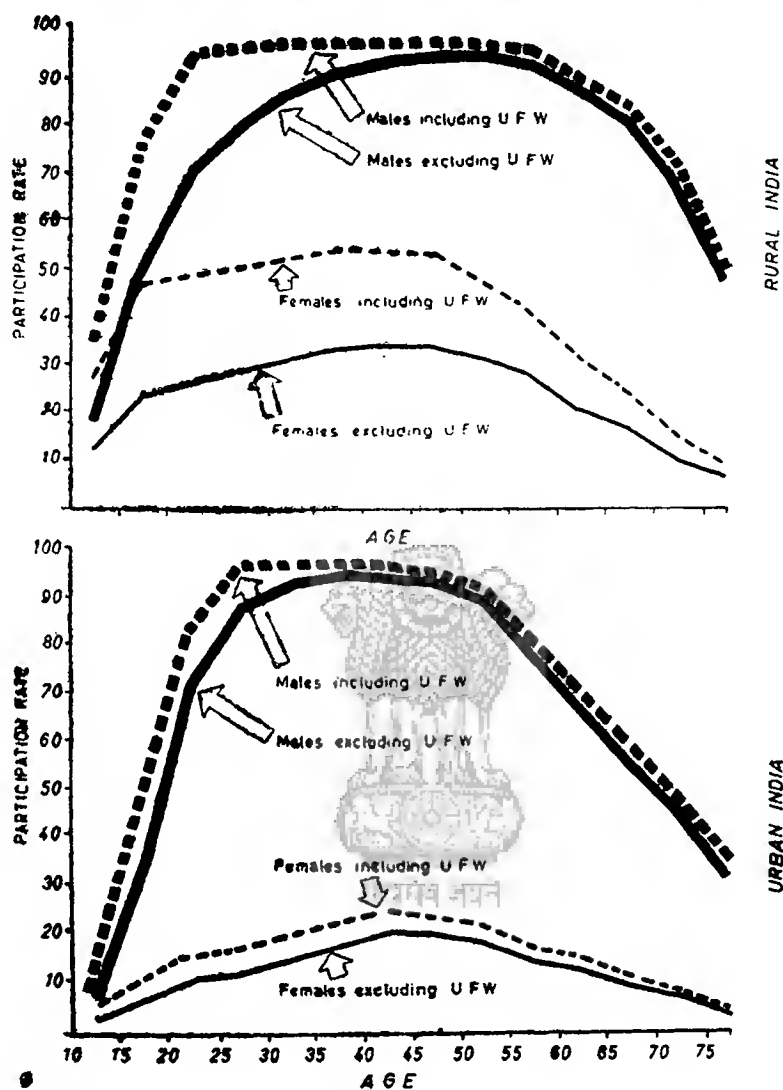
33. It may be noted that Table 9 does not show any rates for the age group 5—9. This exclusion is deliberate. The work performed by the young children is generally only of nominal significance. Moreover, given our assumption in Table 7 that the unemployed persons aged less than 15 years enumerated by the 1961 Census were all in the age group 10—14, the labour force participation rates for the age group 5—9 will be the same as worker rate shown in Table 4.<sup>17</sup>

<sup>17</sup>Most of the working children in the age group 5—9 probably engage in unpaid family work.

**TABLE 9**  
**The Sex-Age-Specific Labour Force Participation Rates, Including and Excluding Unpaid Family Workers**  
**in India According to Rural Urban Residence, 1961 Census Estimates**

Age	India		Rural India		Urban India	
	Includ- ing U.F.W.	Exclud- ing U.F.W.	Includ- ing U.F.W.	Exclud- ing U.F.W.	Includ- ing U.F.W.	Exclud- ing U.F.W.
<b>MALES</b>						
10—14	30.09	16.07	34.26	17.99	11.50	7.53
15—19	71.40	47.67	78.23	50.07	45.67	35.62
20—24	92.99	71.29	95.42	70.61	85.00	73.53
25—29	97.25	82.45	97.36	80.81	96.83	88.70
30—34	97.53	90.50	97.50	87.07	97.61	93.42
35—39	97.77	92.38	97.79	91.62	97.73	95.29
40—44	97.62	94.43	97.84	94.22	96.78	95.24
45—49	97.42	95.23	97.81	95.36	95.68	94.63
50—54	96.67	94.71	97.65	95.50	92.15	91.04
55—59	93.80	91.68	96.29	93.38	81.49	80.27
60—64	87.53	85.23	90.74	88.29	70.53	69.05
65—69	80.66	77.98	84.61	81.82	58.89	56.80
70—74	69.55	66.54	73.04	69.97	48.90	46.21
75+	49.49	46.56	51.84	48.94	35.59	32.46
(70+)	(59.52)	(56.53)	(62.78)	(59.79)	(40.19)	(37.21)
10+	81.10	69.64	83.07	70.12	73.11	67.67
All ages	57.32	49.22	58.08	49.03	54.08	50.06
<b>FEMALES</b>						
10—14	22.81	10.18	26.74	11.90	5.23	2.48
15—19	40.72	20.66	47.26	23.77	11.94	6.98
20—24	43.26	24.03	49.36	26.90	16.10	11.28
25—29	44.84	26.29	50.81	29.21	17.26	12.79
30—34	46.71	28.52	52.30	31.22	20.17	15.71
35—39	49.15	30.92	54.51	33.47	22.52	18.29
40—44	50.13	32.42	54.95	34.62	25.26	21.12
45—49	49.35	32.53	53.93	34.73	24.05	20.35
50—54	44.97	30.14	49.21	32.23	22.27	18.92
55—59	39.18	26.50	42.87	28.47	17.82	15.13
60—64	29.72	20.33	32.35	21.68	15.27	12.94
65—69	23.75	16.29	25.87	17.43	11.36	9.60
70—74	15.35	10.58	16.46	11.12	8.68	7.29
75+	9.67	6.65	10.59	7.18	4.45	3.65
(70+)	(12.56)	(8.64)	(13.59)	(9.19)	(6.54)	(5.45)
10+	39.86	23.53	44.85	25.94	15.88	11.96
All Ages	27.77	16.39	31.16	18.02	11.22	8.45

Figure-1  
**ESTIMATED LABOUR FORCE PARTICIPATION RATES,  
 INCLUDING AND EXCLUDING UNPAID FAMILY WORKERS  
 (U.F.W.), BY SEX AND AGE, RURAL AND URBAN INDIA 1961**





## DYNAMICS OF PARTICIPATION RATES

34. The application of participation rates shown in Table 9 to the projections of population would give us the labour force projections. The population projections prepared under the guidance of the Expert Committee appointed by the Planning Commission are available for this purpose and can be used.<sup>18</sup> Regarding the participation rates, one needs to evaluate the direction and extent of probable changes over the period of projections. Admittedly, it is difficult to anticipate all the changes likely to result from the interaction among the complex factors governing the demand for and the supply of labour. The major factors that can be identified relatively easily are the pace of urbanization, increasing enrolments of children into schools and of young men and women into colleges and Universities and the changes in the age at marriage. Other factors like the changes in the attitudes towards the wage-paid employment of females or the impact of the number and nature of available job opportunities are more difficult to judge. Let us briefly discuss the likely influence of some of these factors.

35. It is evident from Tables 4 and 9 that the male participation rates in rural and urban areas do not differ significantly in the ages 25—59. In fact, in every society almost all the able-bodied men in these age groups participate in economic activity and the assumption of constant participation rates for them is not unrealistic. For ages 10—24 and 60 and over, however, the urban rates tend to be lower than the rural. The difference in the ages 10—24 is apparently due to the continuation of school or college education in urban areas while in ages 60 and over, the application of retirement rules to the wage-paid or salaried employees plays the major role. The limited opportunities for self-employment or unpaid family work and the generally rigid time schedule of urban jobs are also relevant to the rural-urban differences in the participation rates noted above. These latter factors also account for the low female participation rates in urban areas.

36. During 1951—61, urbanization has been slow in India and is unlikely to accelerate during the next two decades. According to the census data, the percentage of urban population has increased from 17·29 in 1951 to 17·97 in 1961. (This slow increase is partly due to the declassification of 803 towns. If the 1961 population of these declassified towns were included in the urban population enumerated by the last census, it would have formed 19·17 per cent of the total.<sup>19</sup> According to projections in use, the proportion of urban population is expected to be 19·93 per cent in 1971 and 21·83 per cent in 1981.<sup>20</sup> These projections imply some decline in the pace of urbanization because even the absorption of the natural increase of urban population in gainful employment would require a fairly rapid growth of employment opportunities in urban areas. Besides, the new industries generally tend to be capital intensive. Therefore, the employment opportunities for rural migrants to urban areas are likely to be limited and rural-urban migration will probably slow down. However, compared to the rural population, the growth of urban population would be at a significantly higher rate. In view of rural-urban differences in participation rates, the result would be some decline in the female participation rates for the country as a whole.

37. The female participation rates in urban areas may be affected by a rise in the age at marriage. The magnitude of the effect would depend on the extent of rise as well as the differences in female participation rates according to marital status. Up to 1961, the age at marriage has risen rather slowly and the rural-urban differences prior to that year are not known.<sup>21</sup> However, it is not unlikely that the

<sup>18</sup>Office of the Registrar General, *Report on the Population Projections worked out under the guidance of the Expert Committee set up by the Planning Commission under the Chairmanship of the Registrar General, India*, New Delhi, 1969. According to the present author, the official population projections are based on estimates of initial levels of fertility and mortality which overstate the gains in life expectancy over the period 1951—61 and underestimate the birth rate. See : Pravin M. Visaria, "Mortality and Fertility in India", *Milank Memorial Fund Quarterly*, Vol. 47, No. 1, January, 1969, pp. 91—116. If this view is correct, alternative projections with assumptions similar to those of the Expert Committee would show a population not different in size but somewhat younger in its age composition and therefore implying a smaller labour force.

<sup>19</sup>In calculating this percentage, the population of 78 Towns, for which the 1961 figures are not available, is assumed to have increased at the same rate as the population of remaining 725 places. An alternative adjustment excludes from the urban population in 1951, the residents of towns declassified in the 1961 Census. According to this procedure, the percentage of urban population in 1951 is estimated at 16·08. See: Census of India, 1961, Vol. I, *India*, Part I-C(i), *Subsidiary Tables*, Delhi, 1968, pp. 9—19.

<sup>20</sup>Office of the Registrar General, *op. cit.* p. 20.

<sup>21</sup>According to the 1961 Census data, the mean age at marriage of females in urban India was 17·9 years, about 2·5 years higher than that of rural females. The average for the country as a whole was 15·9 years.

pace of rise in the age at marriage would be faster after 1961 and the rural-urban differences will perhaps widen. The evidence on the differences in female participation rates according to marital status is rather limited for India. The data based on the special tabulation of the 1961 Census in Maharashtra and the 16th Round of the NSS (1960-61) are shown below in Tables 1 and 2 in Annexure II.

38. It appears that in urban areas the participation rates of never-married females are higher than those of the currently married but lower than of the widowed and divorced. In rural areas, the situation seems to be different though the evidence is somewhat conflicting. In rural Maharashtra, the worker rates for the never-married females, reported by the 1961 Census, were lower than those for married, widowed, etc. However, the 16th Round of the NSS in rural India indicated participation rates for the never-married females to be (i) intermediate between those of the married and the widowed or divorced in ages 15—29 and 60 and over, (ii) the lowest in ages 40—59 and (iii) the highest in the age group 30—39. One suspects that the number of never-married females aged 30 or more in the NSS sample for rural India was perhaps too small to give stable estimates of their labour force participation.<sup>22</sup> On the other hand, it is also possible that the situation in rural India as a whole is somewhat different from that in Maharashtra.

39. The higher participation rates of the never-married females (than of the married) in urban India may be ascribed to the changes in the attitudes of middle classes towards the employment of daughters. The underlying factors, however, might be partly economic. When marriage occurs rather late, the opportunity cost of staying at home, when a job might be obtained, tends to be high. The economic pressures are also relevant but they will tend to increase the participation rates of the married women as well, at least until the latter start having children. On the whole, it seems reasonable to expect that a rise in the age at marriage would tend to raise the participation rates of urban females, and if the NSS data are valid for rural India, also for rural females. (If the census data for rural Maharashtra are typical of the rest of the country, the participation rate of rural females would be expected to decline if the age at marriage rises significantly). However, this effect would be offset at least partly, by the impact of urbanization which seems likely to depress the female participation rates.

40. More importantly, the increasing enrolments in educational institutions will depress the participation rates for young children and the adolescents. In the 26 districts of Maharashtra, the correlation between the percentage of children aged 5—14 enrolled in schools and the worker rates for the age group 0—14 was  $-0.92$  for males and  $-0.82$  for females. (Both the co-efficients were statistically significant at the one per cent level). While the goal of free and compulsory primary education for children up to age 14, enshrined in our Constitution, is yet to be realized in most parts of the country, the proportion of children aged 6—11 enrolled in schools appears to have increased substantially.<sup>23</sup>

41. According to the estimates based on the 1961 Census (Table 4) as well as the NSS data, the participation rates in the age group 5—9 seem to be very low and as noted earlier, it does not seem unreasonable to assume them to be zero. The NSS data for the period 1960—67 also suggest that the participation rates for urban males and females in the ages 10—24 were gradually on the decline. In rural India, a similar trend is evident for males aged 10—19 but for females in the same ages, the tendency appears to be mild.<sup>24</sup> The NSS estimates for some of the Rounds are based on a small sample and are subject to a relatively large sampling error. Therefore, it remains to be seen whether and how far the more recent NSS Rounds and the 1971 Census confirm the impression conveyed by the data for 1960—67.

<sup>22</sup>The total number of rural females interviewed in the 16th Round was 57,056 of whom 23,551 were never-married. Of the latter, about 98.6 per cent were aged less than 20 years. See : The NSS Report 114, *Table, with Notes on Employment and Unemployment in Rural Areas*, Sixteenth Round, July, 1960—June 1961, Delhi, 1967, p. 40.

<sup>23</sup>According to official estimates, 78 per cent of the children aged 6—11 and 34 per cent of those aged 11—14 were enrolled in primary and middle schools, respectively, in 1968-69. The corresponding figures for 1960-61 were 62 and 22, respectively. See : Planning Commission, *Fourth Five-Year Plan : Draft : 1969—1974*, p. 280.

<sup>24</sup>Pravin Visaria, "Employment and Unemployment in India", *op. cit.*, Section II, Tables 8 and 9 and the relevant discussion.

42. The official statistics suggest a substantial increase between 1960-61 and 1969-89 in the proportion of children and young persons enrolled in schools or colleges—about 50, 75 and 93 per cent for the age groups 11-14 and 14-17 and 17-23 respectively. Yet, even in 1968-69 only 33.5, 19.4 and 2.9 per cent of those in the three age groups were estimated to be enrolled in educational institutions.<sup>22</sup> Of course, these percentages would be significantly higher for the urban population where most of the higher educational institutions are concentrated. This might explain the decline in urban participation rates indicated by the NSS Rounds. However, for the country as a whole, one can hardly expect much decline in the participation rates for the age group 20-24 during 1961-81. The major decline is likely to be in the participation rates for ages 10-19. While it is difficult to estimate the extent of decline, it is assumed that by 1981, (i) the participation rate for the age group 10-14 will decline linearly by 75 per cent, both for males and females and (ii) that for the age group 15-19 will fall by 25 per cent for males and by 10 per cent for females.<sup>23</sup> An alternative projection will be made on the assumption of constant participation rates so that the effect of assumed declines in participation rates in ages 10-19 can be seen clearly.

43. The discussion above has been in terms of aggregate participation rates and labour force projection. The changes in the importance of unpaid family work will determine the participation rates excluding unpaid family workers. The factors likely to influence the extent of unpaid family work are very complex. With population growth and an increase in the size of the labour force, the male labour might tend to replace female labour. On the other hand, if the adoption of more intensive agriculture results in the expected increases in labour requirements on farms, the wage rates of agricultural labourers will tend to rise as is reported to have happened in the Punjab and parts of Andhra Pradesh and Tamil Nadu. Given economic rationality, such a rise in the wages of hired labour would induce a substitution of unpaid family labour, whose relative price would fall. (The opportunity cost of staying at home would also rise and would strengthen the incentive for females to work either as unpaid family workers or, if the opportunity for such work is limited, as agricultural labourers. However, such an increase in wages will be associated with a rise in the income of farmers and if the input of unpaid household labour is an 'inferior good' in the terminology of Economics, the negative income effect could offset (and even overwhelm) the positive substitution effect. The female participation rates and the proportion of unpaid family workers among those in the labour force might decline as a result. The net balance of the various forces cannot be foreseen. However, as noted earlier in section IV, the Japanese census data for 1960 and 1965 suggest that despite the high level of economic development of that country, a fairly high proportion of Japanese female workers continue to be unpaid family workers. It is assumed that in India also, the developments upto 1981 would not lower the importance of unpaid family workers in agriculture and household industry. In the projections below, the percentage of unpaid family workers in the labour force by sex and age is assumed to remain the same as implicit in the estimates of participation rates, including and excluding unpaid family workers in 1961 (Table 9).

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## VII

### LABOUR FORCE PROJECTIONS

44. In the light of the discussion above, we can obtain two alternative projections of the labour force. One projection, shown in Table 10, is based on the assumption that the sex-age-specific participation rates, including and excluding unpaid family workers estimated from the 1961 Census data will continue over the period 1961-81. Table 11 presents a conventional summary of the projections. It should be noted that in 1961 the percentage of unpaid family workers in the labour force aged 10 and over was about 14 for males and 41 for females. More importantly, the exclusion of unpaid family workers from consideration would lower the estimate of net additions to the labour force (both sexes together) during 1961-81 by about 29.2 million in ages 10 and over and about 23.6 million in ages 15 and over.

<sup>22</sup>Planning Commission, *op. cit.*, pp. 280-284. The percentages for boys are 46.6 for the age group 11-14 and 28.7 for ages 14-17, more than twice as high as for girls.

<sup>23</sup>In Japan during 1950-55, the participation rates of males and females aged 15-19 declined by about 30 and 15 per cent respectively. The rate for males aged 20-24 remained virtually constant while the corresponding rate for females increased by about 17 per cent. See : United Nations, *Demographic Aspects of Manpower*, *op. cit.*, pp. 63-67.

TABLE 10

*Estimates of Male Labour Force (Including and Excluding Unpaid Family Workers) in India, by Age, 1961-81*

(in millions)

Age		1961	1966	1971	1976	1981
<b>Including Unpaid Family Workers</b>						
10-14	..	7.69	8.74	10.33	11.81	13.06
15-19	..	15.83	17.94	20.45	24.25	27.77
20-24	..	18.16	20.17	22.91	26.19	31.15
25-29	..	17.14	18.91	20.62	23.49	26.95
30-34	..	15.37	16.66	18.09	20.25	23.16
35-39	..	13.33	14.80	16.19	17.72	19.93
40-44	..	11.30	12.62	14.22	15.72	17.29
45-49	..	9.43	10.53	11.98	13.67	15.20
50-54	..	7.57	8.55	9.76	11.28	12.96
55-59	..	5.68	6.90	7.54	8.78	10.23
60-64	..	3.84	4.47	5.30	6.29	7.40
65-69	..	2.35	2.80	3.39	4.13	4.96
70+	..	1.97	2.30	2.79	3.47	4.35
10+	..	129.06	144.57	163.57	187.05	214.42
<b>Excluding Unpaid Family Workers</b>						
10-14	..	4.11	4.67	5.52	6.31	6.97
15-19	..	10.57	11.98	13.65	16.19	18.34
20-24	..	13.92	15.46	17.57	20.08	23.88
25-29	..	14.33	15.69	17.48	19.91	22.85
30-34	..	14.27	15.46	16.79	18.79	21.49
35-39	..	12.60	13.98	15.30	16.75	18.83
40-44	..	10.93	12.21	13.76	15.21	16.73
45-49	..	9.22	10.29	11.71	13.36	14.86
50-54	..	7.43	8.37	9.56	11.05	12.69
55-59	..	5.55	6.36	7.37	8.58	10.00
60-64	..	3.74	4.36	5.16	6.13	7.00
65-69	..	2.28	2.71	3.27	3.99	4.80
70+	..	1.87	2.18	2.65	3.30	4.13
10+	..	110.99	123.71	139.79	159.64	182.99

TABLE 10 (concl'd)

*Estimates of Female Labour Force (Including and Excluding Unpaid Family Workers) in India, by Age, 1961—81*

(in millions)

Age		1961	1966	1971	1976	1981
<b>Including Unpaid Family Workers</b>						
10—14	..	5.53	6.37	7.56	8.42	9.30
15—19	..	8.51	9.68	11.20	13.30	14.87
20—24	..	8.01	8.82	10.07	11.66	13.91
25—29	..	7.50	8.06	8.91	10.19	11.86
30—34	..	6.83	7.41	8.13	9.05	10.40
35—39	..	5.97	6.81	7.50	8.32	9.31
40—44	..	5.06	5.71	6.65	7.42	8.28
45—49	..	4.14	4.63	5.34	6.31	7.09
50—54	..	3.07	3.46	3.95	4.64	5.52
55—59	..	2.11	2.38	2.76	3.23	3.82
60—64	..	1.22	1.38	1.60	1.91	2.25
65—69	..	0.67	0.79	0.92	1.11	1.33
70+	..	0.48	0.53	0.61	0.73	0.89
10+	..	59.08	66.02	75.20	86.28	98.83
<b>Excluding Unpaid Family Workers</b>						
10—14	..	2.47	2.85	3.37	3.76	4.15
15—19	..	4.32	4.91	5.68	6.75	7.55
20—24	..	4.45	4.90	5.59	6.48	7.73
25—29	..	4.40	4.72	5.22	5.97	6.96
30—34	..	4.17	4.52	4.96	5.52	6.35
35—39	..	3.75	4.28	4.72	5.23	5.86
40—44	..	3.27	3.69	4.30	4.80	5.35
45—49	..	2.73	3.05	3.52	4.16	4.67
50—54	..	2.05	2.32	2.65	3.11	3.70
55—59	..	1.43	1.61	1.87	2.18	2.58
60—64	..	0.83	0.94	1.10	1.30	1.54
65—69	..	0.46	0.54	0.63	0.76	0.91
70+	..	0.33	0.36	0.42	0.50	0.61
10+	..	34.66	38.71	44.04	50.53	57.96

NOTE : 1. The projections assume the labour force participation rates shown in Table 9 to hold for the period 1961—81.

2. Each figure has been rounded independently.

TABLE 11

*Estimates of Labour Force in India in Specified Age Groups, by Sex and Including and Excluding Unpaid Family Workers*

(in Millions)

Year	Labour Force Including Unpaid Family Workers			Labour Force Excluding Unpaid Family Workers			Unpaid Family Workers		
	10+	15+	15-59	10+	15+	15-59	10+	15+	15-59
<b>MALES</b>									
1961 ..	129.66	121.98	113.81	110.99	106.89	99.00	18.67	15.09	14.81
1966 ..	144.57	135.84	126.27	123.71	119.04	109.80	20.87	16.80	16.47
1971 ..	163.57	153.24	141.76	139.79	134.27	123.18	23.79	18.97	18.58
1976 ..	187.05	175.24	161.35	159.64	153.34	139.92	27.41	21.91	21.43
1981 ..	214.42	201.36	184.65	182.99	176.01	159.88	31.43	25.35	24.77
<b>INCREMENTS</b>									
1961-66 ..	14.91	13.96	12.46	12.71	12.15	10.79	2.20	1.81	1.86
1966-71 ..	19.00	17.40	15.50	16.08	15.22	13.39	2.92	2.18	2.11
1971-76 ..	23.48	22.00	19.59	19.86	19.07	16.74	3.62	2.93	2.85
1976-81 ..	27.37	26.12	23.30	23.34	22.67	19.96	4.03	3.44	3.34
1961-81 ..	84.76	79.38	70.84	71.99	69.12	60.88	12.76	10.26	9.96
<b>FEMALES</b>									
1961 ..	59.08	53.55	51.19	34.66	32.19	30.57	24.42	21.36	20.62
1966 ..	66.02	59.65	56.96	38.71	35.86	34.02	27.32	23.79	22.94
1971 ..	75.20	67.64	64.50	44.04	40.67	38.51	31.16	26.98	25.99
1976 ..	86.28	77.86	74.12	50.53	46.77	44.21	35.75	31.08	29.91
1981 ..	98.83	89.53	85.06	57.96	53.81	50.74	40.87	35.72	34.32
<b>INCREMENTS</b>									
1961-66 ..	6.94	6.09	5.77	4.05	3.67	3.44	2.89	2.42	2.32
1966-71 ..	9.18	8.00	7.55	5.33	4.81	4.50	3.84	3.19	3.05
1971-76 ..	11.08	10.21	9.61	6.49	6.11	5.69	4.59	4.11	3.92
1976-81 ..	12.55	11.67	10.94	7.43	7.03	6.53	5.19	4.64	4.41
1961-81 ..	39.75	35.98	33.86	23.30	21.62	20.17	16.45	14.36	13.70

TABLE 11—(concl'd)

(in millions)

Year	Labour Force Including Unpaid Family Workers			Labour Force Excluding Unpaid Family Workers			Unpaid Family Workers			
	10+	15+	15—59	10+	15+	15—59	10+	15+	15—59	
PERSONS										
1961	..	188.74	175.53	165.00	145.65	139.08	129.57	43.09	36.45	35.43
1966	..	210.59	195.49	183.23	162.42	154.90	143.82	48.19	40.59	39.41
1971	..	238.77	220.88	206.26	183.83	174.94	161.69	54.95	45.95	44.57
1976	..	273.33	253.10	235.47	210.17	200.11	184.13	63.16	52.99	51.34
1981	..	313.25	290.89	269.71	240.95	229.82	210.62	72.30	61.07	59.09
INCREMENTS										
1961—66	..	21.85	20.05	18.22	16.76	15.82	14.23	5.09	4.23	3.98
1966—71	..	28.18	25.40	23.05	21.41	20.03	17.89	6.76	5.37	5.16
1971—76	..	34.56	32.21	29.20	26.35	25.18	22.43	8.21	7.04	6.77
1976—81	..	39.92	37.79	34.24	30.77	29.70	26.49	9.16	8.08	7.75
1961—81	..	124.51	115.36	104.70	95.29	90.74	81.05	29.21	24.62	23.66

NOTE : 1. The projections assume the labour force participation rates shown in Table 9 to hold for the period 1961—81.

2. Each figure has been rounded independently.

45. In Table 11 one can read the projected labour force in the ages 15—59 or 15 and over. These figures indicate the effect on the size of the labour force of zero participation rates in the excluded age groups. However, in Table 12 is shown the alternative labour force projection which allows for the assumed decline of 75 per cent in the participation rates for the age group 10—14 and of 25 and 10 per cent in the rate for males and females, respectively, in the age group 15—19. In Section A of the table, we have shown only the labour force in ages 10—14 and 15—19 because for other age groups, the figures would be the same as shown in Table 10. Section B of Table 12 presents a conventional summary of the projection, comparable to that in Table 11. In Section C of the table we have shown the percentage increase in the labour force excluding unpaid family workers during successive quinquennia.

46. It should be noted that the assumed decline in participation rates would lower the male labour force aged 10 and more in 1981 and the net addition to it over the period 1961—81 by about 17 million if we include unpaid family workers in the labour force and by 10 million if unpaid family workers are excluded. The corresponding difference in the female labour force would be about 8 (including unpaid workers) and 4 million (excluding unpaid workers).<sup>27</sup> Thus declines in participation rates would tend to make the task of employment planners more manageable. Of course, labour force and the participation rates are generally elastic and they might adjust fairly promptly to the prevailing situation regarding the demand for labour. For example, at least some of the young men and women in the age groups 15—19 or 20—24 who go to school or colleges do so because of the non-availability of jobs that would be acceptable to them. An improvement in the employment situation might bring them into active labour market and thereby raise (instead of lower, as assumed in the alternative projection) the participation rates. The contrary is also possible.

<sup>27</sup>It should be noted that the additions to labour force aged 15 and over, during the successive quinquennia, tend to be larger than those to labour force aged 10 and over because the participation rates for the age group 10—14 are assumed to decline faster than those for the age group 15—19.

TABLE 12

*Estimates of Labour Force in India in Specified Age Groups, with Assumed Decline in Participation Rates in Ages 10—19*

(in millions)

Sex	Age	(A) Labour Force in Ages 10—19				
		1961	1966	1971	1976	1981
Labour Force including Unpaid Family Workers						
Males	10—14	7.69	7.10	6.46	5.17	3.26
	15—19	15.83	16.82	17.89	19.70	20.83
Females	10—14	5.53	5.18	4.72	3.69	2.32
	15—19	8.51	9.44	10.64	12.31	13.39
Labour Force excluding Unpaid Family Workers						
Males	10—14	4.11	3.79	3.45	2.76	1.74
	15—19	10.57	11.24	11.95	13.16	13.91
Females	10—14	2.47	2.31	2.11	1.64	1.04
	15—19	4.32	4.79	5.39	6.24	6.79

(B) Summary Figures

Year/Period	Labour Force including Unpaid Family Workers			Labour Force excluding Unpaid Family Workers			Unpaid Family Workers		
	10+	15+	15—59	10+	15+	15—59	10+	15+	15—59
<b>MALES</b>									
1961	129.66	121.98	113.81	110.99	106.89	99.00	18.67	15.09	14.81
1966	141.82	134.72	125.15	122.69	118.30	109.05	19.72	16.42	16.09
1971	157.14	150.68	139.21	136.02	132.57	121.49	21.13	18.12	17.72
1976	175.86	170.70	156.80	153.07	150.31	136.89	22.79	20.39	19.91
1981	197.68	194.42	177.71	173.13	171.38	155.25	24.55	23.03	22.46
<b>INCREMENTS</b>									
1961—66	12.16	12.74	11.34	11.10	11.41	10.05	1.05	1.33	1.28
1966—71	15.32	15.96	14.06	13.93	14.27	12.44	1.41	1.70	1.63
1971—76	18.72	20.02	17.59	17.05	17.74	15.40	1.66	2.27	2.19
1976—81	21.82	23.72	20.91	20.06	21.07	18.36	1.76	2.64	2.55
1961—81	68.02	72.44	63.90	62.14	64.49	56.25	5.88	7.94	7.65
<b>FEMALES</b>									
1961	59.08	53.55	51.19	34.66	32.19	30.57	24.42	21.36	20.62
1966	64.58	59.42	56.72	38.04	35.73	33.89	26.54	23.67	22.82
1971	71.81	67.08	63.94	42.48	40.38	38.23	29.32	26.71	25.72
1976	80.55	76.86	73.12	47.91	46.26	43.70	32.64	30.60	29.42
1981	90.37	88.04	83.57	54.08	53.05	49.98	36.29	35.00	33.59
<b>INCREMENTS</b>									
1961—66	5.50	5.86	5.53	3.38	3.54	3.32	2.12	2.31	2.20
1966—71	7.23	7.67	7.22	4.44	4.65	4.34	2.78	3.04	2.90
1971—76	8.74	9.78	9.18	5.43	5.88	5.47	3.32	3.89	3.70
1976—81	9.82	11.18	10.45	6.17	6.79	6.28	3.65	4.40	4.17
1961—81	31.29	34.49	32.38	19.42	20.86	19.41	11.87	13.64	12.97

(C) Percentage Increase in the Labour Force excluding Unpaid Family Workers

Period	MALES			FEMALES		
	10+	15+	15—59	10+	15+	15—59
1961—66	10.00	10.67	10.15	9.75	11.00	10.86
1966—71	11.41	12.05	11.41	11.67	13.01	12.81
1971—76	12.53	13.38	12.68	12.78	14.56	14.31
1976—81	13.11	14.02	13.41	12.88	14.68	14.37
1961—71	22.55	24.02	22.72	22.56	25.44	25.06
1971—81	27.28	29.28	27.79	27.31	31.38	30.74
1961—81	55.99	60.33	56.81	56.03	64.80	63.49



If our assumptions regarding participation rates hold good and the rates for only the ages 10—19 decline, the proportionate increase in the labour force will rise steadily over the period 1961—81, as shown in Section C of Table 12. (The expected increase in the female labour force seems to be higher than in the male labour force because the decline in the participation rate of females in the age group 15—19 is assumed to be slower than that for males). The pressures in the employment market are therefore, likely to be accentuated and the new entrants into the labour force will encounter a progressively more difficult situation.

### VIII

#### ENTRIES INTO AND WITHDRAWALS FROM THE LABOUR FORCE

48. The conventional estimates of the net additions to the labour force during successive quinquennia do not show the number of new entrants into the labour force and the withdrawals from it. The non-availability of participation rates and therefore, of labour force projections by five year age groups has perhaps been a contributory factor.

49. This distinction is important because at least in urban India, between 55 and 75 per cent of the unemployed males enumerated by the 1961 Census or surveyed by the NSS or registered with Employment Exchanges tend to be in the age group 15—24 or 16—26. Even in rural areas, between 30 to 40 per cent of those classified as unemployed tend to be in these ages. A majority of these young unemployed are reported to be new entrants into the labour force<sup>28</sup>. Obviously, the new entrants into the labour force cannot take the place of those who retire or otherwise withdraw from the labour force because of age or effects of ageing. The general decline in mortality is likely to slow down progressively the withdrawals from the labour force because of death. In any case, although the incidence of mortality tends to be relatively higher in post-middle ages, the resultant vacancies do not provide openings for the inexperienced young men entering the labour force. The recruitment for vacancies arising from withdrawals from the labour force naturally benefits those who can claim seniority and tends to provide for promotion rather than new entrants into the labour force. The problem may be partly frictional but it results in fairly long "waiting period" for the new entrants. To facilitate the absorption of new entrants into the labour force in gainful employment, an emphasis has often been laid on vocational education and training for specific jobs. This prescription is certainly valid, at least partly, but the magnitude of the task ahead would be appreciated better if labour force projections distinguished between new entrants into the labour force and the expected withdrawals.

50. The estimates of entries into or withdrawals from the labour force during a quinquennium can be obtained through a simple procedure of comparing the expected number of persons in the labour force in an age group in 1966 (say, 20—24) with that in the five-year younger age group in 1961 (15—19), etc. The procedure is illustrated in Table 13 on the basis of the projection in Table 10, which assumes constant participation rates. The estimates of entries and withdrawals, based on the two projections are summarized in Table 14<sup>29</sup>. Estimates are shown for entries beginning with (i) age 10 and (ii) age 15. The number of withdrawals, which occur at ages above 30, remains unaffected by the initial age taken into account as also the assumed changes in participation rates. However, in the projection with changes in participation rates, the number of entries in ages 15 and over seems to be larger than that in ages 10 and over. Once again, this oddity arises from the assumption of a faster decline in participation rate for the age group 10—14 than in the rate for ages 15—19.

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<sup>28</sup>Pravin Visaria, "Employment and Unemployment in India", *op.cit.* Section V.

<sup>29</sup>It should be noted that the figures in Table 14 somewhat understate the number of entries and over state the withdrawals because no allowance is made for the effect of mortality, during the quinquennium under consideration, on persons who were already in the labour force at the start of the period.

TABLE 13

*Estimates of Entries into and withdrawals from the Labour Force, including and excluding Unpaid Family Workers, by Sex and Age, during 1961—66, 1966—71, 1971—76 and 1976—81 (in Millions)\**

Age at the end of Quinquennium	Labour Force including Unpaid Family Workers				Labour Force excluding Unpaid Family Workers			
	1961—66	1966—71	1971—76	1976—81	1961—66	1966—71	1971—76	1976—81
MALES								
10—14	8.74	10.33	11.81	13.06	4.67	5.52	6.31	6.97
15—19	10.25	11.71	13.92	15.96	7.87	8.98	10.67	12.23
20—24	4.34	4.97	5.74	6.90	4.89	5.59	6.43	7.69
25—29	0.35	0.45	0.58	0.76	1.77	2.02	2.34	2.77
30—34	-0.48	-0.42	-0.37	-0.33	0.93	1.10	1.31	1.58
35—39	-0.57	-0.47	-0.37	-0.32	-0.29	-0.16	-0.04	0.04
40—44	-0.71	-0.58	-0.47	-0.43	-0.39	-0.22	-0.09	-0.02
45—49	-0.77	-0.64	-0.55	-0.52	-0.64	-0.50	-0.40	-0.35
50—54	-0.88	-0.77	-0.70	-0.71	-0.85	-0.73	-0.64	-0.67
55—59	-1.07	-1.01	-0.98	-1.05	-1.06	-1.00	-0.98	-1.05
60—64	-1.21	-1.20	-1.25	-1.38	-1.19	-1.20	-1.24	-1.38
65—69	-1.04	-1.08	-1.17	-1.33	-1.03	-1.09	-1.17	-1.33
70+	-2.02	-2.31	-2.71	-3.25	-1.97	-2.24	-2.62	-3.16
FEMALES								
10—14	6.37	7.56	8.42	9.30	2.85	3.37	3.76	4.15
15—19	4.15	4.83	5.74	6.45	2.44	2.83	3.38	3.79
20—24	0.31	0.39	0.46	0.61	0.58	0.68	0.80	0.98
25—29	0.05	0.09	0.12	0.20	0.27	0.32	0.38	0.48
30—34	-0.09	0.07	0.14	0.21	0.12	0.24	0.30	0.38
35—39	-0.02	0.09	0.19	0.26	0.11	0.20	0.27	0.34
40—44	-0.26	-0.16	-0.08	-0.04	-0.06	0.02	0.08	0.12
45—49	-0.43	-0.37	-0.34	-0.33	-0.22	-0.17	-0.14	-0.13
50—54	-0.68	-0.68	-0.70	-0.79	-0.41	-0.40	-0.41	-0.46
55—59	-0.69	-0.70	-0.72	-0.82	-0.44	-0.45	-0.47	-0.53
60—64	-0.73	-0.78	-0.85	-0.98	-0.49	-0.51	-0.57	-0.64
65—69	-0.43	-0.46	-0.49	-0.58	-0.29	-0.31	-0.34	-0.39
70+	-0.62	-0.71	-0.89	-0.95	-0.43	-0.48	-0.55	-0.65

NOTE: The figures without any preceding sign connote entries while those with a minus sign show withdrawals.

\*This table is based on the labour force projections in Table 10, which assume constant participation rates.

TABLE 14

*Estimates of Entries into and Withdrawals from the Labour Force, including and excluding Unpaid Family Workers, during 1961—81, in (i) Ages 10 and over and (ii) 15 and over, according to Two Projections (in millions)*

Period	Labour Force including Unpaid Family Workers			Labour Force excluding Unpaid Family Workers		
	Entries	Withdrawals	Net Additions	Entries	Withdrawals	Net Additions
<b>(A) Projection based on Constant Participation Rates.</b>						
<b>(i) Labour Force in Ages 10 and over:</b>						
	<b>MALES</b>					
1961—66	23.68	8.75	14.93	20.13	7.42	12.71
1966—71	27.46	8.48	18.98	23.21	7.14	16.07
1971—76	32.05	8.57	23.48	27.06	7.18	19.88
1976—81	36.68	9.32	27.36	31.28	7.96	23.32
1961—81	119.87	35.12	84.75	101.68	29.70	71.98
	<b>FEMALES</b>					
1961—66	10.88	3.95	6.93	6.37	2.34	4.03
1966—71	13.03	3.86	9.17	7.66	2.32	5.34
1971—76	15.07	3.98	11.09	8.97	2.48	6.49
1976—81	17.03	4.49	12.54	10.24	2.80	7.44
1961—81	56.01	16.28	39.73	33.24	9.94	23.30
<b>(ii) Labour Force in Ages 15 and over.</b>						
	<b>MALES</b>					
1961—66	22.63	8.75	13.88	19.57	7.42	12.15
1966—71	25.87	8.48	17.39	22.36	7.14	15.22
1971—76	30.57	8.57	22.00	26.27	7.18	19.09
1976—81	35.43	9.32	26.11	30.62	7.96	22.66
1961—81	114.50	35.12	79.38	98.82	29.70	69.12
	<b>FEMALES</b>					
1961—66	10.04	3.95	6.09	5.99	2.34	3.65
1966—71	11.84	3.86	7.98	7.14	2.32	4.82
1971—76	14.21	3.98	10.23	8.58	2.48	6.10
1976—81	16.13	4.49	11.66	9.85	2.80	7.05
1961—81	52.24	16.28	35.96	31.56	9.94	21.62

TABLE 14—concl'd

*Estimates of Entries into and Withdrawals from the Labour Force, including and excluding Unpaid Family Workers, during 1961—81, in (i) Ages 10 and over and (ii) 15 and over, according to Two Projections (in millions)—concl'd*

Period	Labour Force including Unpaid Family Workers			Labour Force excluding Unpaid Family Workers		
	Entries	Withdrawals	Net Additions	Entries	Withdrawals	Net Additions
(B) Projection with Declines in Participation Rates for Ages 10—19.						
(i) Labour Force in Ages 10 and over :						
MALES						
1961—66	20.92	8.75	12.17	18.51	7.42	11.09
1966—71	23.79	8.48	15.31	21.06	7.14	13.92
1971—76	27.29	8.57	18.72	24.25	7.18	17.07
1976—81	31.13	9.32	21.81	28.00	7.96	20.04
1961—81	103.13	35.12	68.01	91.82	29.70	62.12
FEMALES						
1961—66	9.45	3.95	5.50	5.71	2.34	3.37
1966—71	11.06	3.86	7.20	6.77	2.32	4.45
1971—76	12.75	3.98	8.77	7.89	2.48	5.41
1976—81	14.29	4.49	9.80	9.00	2.80	6.20
1961—81	47.55	16.28	31.27	29.37	9.94	19.43
(ii) Labour Force in Ages 15 and over :						
MALES						
1961—66	21.51	8.75	12.76	18.83	7.42	11.41
1966—71	24.43	8.48	15.95	21.40	7.14	14.26
1971—76	28.58	8.57	20.01	24.94	7.18	17.76
1976—81	33.04	9.32	23.72	29.02	7.96	21.06
1961—81	107.56	35.12	72.44	94.19	29.70	64.49
FEMALES						
1961—66	9.80	3.95	5.85	5.87	2.34	3.53
1966—71	11.52	3.86	7.66	6.97	2.32	4.65
1971—76	13.78	3.98	9.80	8.36	2.48	5.88
1976—81	15.66	4.49	11.17	9.60	2.80	6.80
1961—81	50.76	16.28	34.48	30.80	9.94	20.86

NOTE : The differences between the figures of net additions to the labour force shown above and those in Tables 11 and 12 arise from rounding of figures.

51. The number of new entrants into the labour force (excluding unpaid family workers) in ages 10 and more exceeds the net additions during 1961—81 by about 41 per cent in the projection based on constant participation rates and by about 48 per cent in the other projection. The corresponding figures for the female labour force are 43 and 51 per cent. These figures suggest the importance of separate estimates of new entrants into the labour force. It is evident also that the number of withdrawals is likely to rise at a much slower rate than the number of new entries. This factor accounts for the progressive rise in the rate of increase of the labour force shown in Table 12 and aggravates the problem of providing gainful employment to the new entrants into the labour force. While the problem may not be felt by the children of the land-owning farmers in rural areas who can work on the family farms, it is likely to be quite serious for the families of agricultural labourers or landless non-agricultural workers and for the urban population.

## IX

### CONCLUSION

52. It is pertinent to note that the participation rates reported by the 16th Round of the NSS are very similar to the estimates for India based on the 1961 Census, that have been used in the present study.<sup>30</sup> The NSS participation rates, with the necessary interpolation, would have yielded labour force projections very similar to those presented above.

53. Finally, one must note the need for further refinements in the projections outlined above. In Section IV above, a reference was made to the need was made to the need for separate estimates of the self-employed and the employees. Similarly, in Table 9 we have presented estimates of rural and urban participation rates as well. However, because of the non-availability of sufficiently detailed population projections for rural and urban areas, our projections in Tables 10 and 12 pertain to the country as a whole. For well-informed employment planning, labour force projections will have to be prepared for different States of India, with due recognition of such important variables as rural urban residence, sex, age, educational attainment, and status or class of worker. For this purpose, our knowledge of the labour force participation rates of different segments of the population needs to be improved substantially. Micro-studies are necessary to examine the validity of the apparently sharp differences in the level of economic activity by females in different parts of the country. Simultaneously, more information is necessary on the seasonal fluctuations in the size and characteristics of the rural labour force and the degree of commitment to the labour force on the part of those who work as unpaid family workers. Such studies would strengthen the empirical basis for projections of the labour force and for employment planning.

54. The main results of the study may be summarized as follows :

- (i) The exclusion of unpaid family workers affects the labour force participation rates in rural areas more than the rates for the urban population. The effect is seen particularly in the participation rates for females (See Table 9, Figure 1).
- (ii) Even if the participation rates for the age group 10—19 decline as postulated, the male labour force aged 15 and over will increase from 122 million in 1961 to 194 million in 1981, i.e. by 72 million. Over the same period, the female labour force will increase by about 34 million from 54 million in 1961 to 88 million in 1981. The exclusion of unpaid family workers from consideration lowers the male labour force aged 15 and over in 1981 by 23 million and the corresponding female labour force by 35 million. In the labour force excluding unpaid family workers, the net additions during 1961—81 would be 64 and 21 million among males and females, respectively. (See Table 12).
- (iii) The estimates of participation rates by five year age groups have made possible a distinction between entries into and withdrawals from the labour force. It seems that the addition of 64 million to the male labour force (excluding unpaid family workers and aged 15 and over) during 1961—81, noted above, will result from entries of 94 million men (aged 15—34) and withdrawals by about 30 million men (aged 35 and more). Similarly, the addition of 21 million to the corresponding female labour force will result from entries of about 31 million women and (aged 15—44) withdrawals by about 10 million (aged 45 and over). See Table 14, Section B (ii).

<sup>30</sup>Pravin Visaria "Employment and Unemployment in India" op. cit. Table 1 and the relevant discussion.

TABLE 1

*Unpaid Family workers as per cent of the Labour Force in Rural India, by Sex and Age, according to the National Sample Survey Data for Specified Rounds.*

Age		Males			Females		
		9th Round	10th Round	11th and 12th Rounds	9th Round	10th Round	11th and 12th Rounds
0-6	..		75.00	61.55		88.89	60.00
7-15	..	47.71	52.69	48.82	60.59	65.33	50.97
16-17	..	34.90	37.26	38.67	56.75	63.95	47.14
18-21	..	27.85	30.53	30.33	52.37	50.34	46.62
22-26	..	18.95	19.67	20.46	49.58	52.25	43.59
27-36	..	7.49	9.73	8.94	44.33	48.30	41.11
37-46	..	3.39	3.32	3.58	41.12	43.13	36.31
47-56	..	2.38	1.82	2.63	35.81	39.69	35.26
57-61	..	4.22	3.52	3.58	40.36	37.39	23.02
62+	..	4.41	3.11	4.26	26.73	27.38	33.93
All Ages	..	15.51	16.96	16.56	46.98	49.26	41.62
Sample Size : Population	..	20,654	24,991	86,520	19,758	24,238	83,821
Labour Force	..	12,233	14,444	47,712	5,247	4,947	22,149

Age		Males				Females			
		16th Round	17th Round	19th Round*	21st Round*	16th Round	17th Round	19th Round*	21st Round*
3-9	..	57.62	47.03	43.66	59.31	69.58	61.21	35.68	54.87
10-14	..	46.87	43.61	32.57	41.45	49.19	54.65	47.94	51.48
15-19	..	35.44	36.46	27.73	37.97	43.43	51.66	36.34	50.78
20-24	..	26.00	28.73	20.10	28.69	45.09	49.12	31.65	46.37
25-29	..	15.76	17.74	12.47	20.38	40.95	45.11	29.90	41.99
30-39	..	7.95	8.65	3.99	9.39	38.92	43.45	30.24	38.20
40-49	..	3.25	2.51	3.15	3.73	37.24	35.30	29.28	35.62
50-59	..	2.56	1.72	1.02	2.54	34.58	37.64	28.55	33.39
60+	..	3.98	3.08	1.94	4.36	33.05	31.98	26.24	31.04
All Ages	..	15.84	15.25	11.22	16.32	42.37	43.82	31.69	40.86
Sample Size : Population	..	59,315	146,619	20,187	20,896	57,056	1,39,724	19,282	20,307
Labour Force	..	32,772	76,357	10,560	11,119	14,985	28,745	5,034	5,588

\*Integrated Household Survey (Schedule 17).

The various NSS rounds were undertaken during the time period specified below :

Round	Survey Period	Reference	Period	N.S.S. Report No.	Pages
9	May—August 1955 ..	9	Usual Status/one year	16	88—90
10	December 1955—May 1956 ..	10	one day	34	42—44
11 & 12	August 1956—August 1957 ..	11 & 12	one day	52	57—59
16	July 1960—June 1961 ..	11	&	114	22—24
17	September 1961—July 1962 ..	12	One day	197 (Draft)	20—21
19	July 1964—June 1965 ..			201 (Draft)	42—59
21	July 1966—June 1967	16	One week	Preliminary cyclostyled tables	
		17			
		19			
		21			

TABLE 2

## ANNEXURE I

*Unpaid Family Workers as per cent of the Labour Force in Urban India, by Sex and Age, according to the National Sample Survey Data for Specified Rounds*

Age	Males				Females			
	9th Round	10th Round	11th and 12th Round	13th Round	9th Round	10th Round	11th and 12th Round	13th Round
0-6	13.33	100.00	..	60.00	..	50.00	..	..
7-15	35.21	30.25	30.54	26.90	48.04	56.89	50.00	38.46
16-17	22.01	21.54	21.22	22.83	37.04	42.67	35.41	26.56
18-21	13.54	14.56	14.58	14.69	28.81	35.12	33.70	33.31
22-26	7.99	8.25	8.94	9.66	29.52	25.88	27.71	25.93
27-36	3.00	2.79	3.26	4.05	26.67	30.16	26.24	19.74
37-46	1.41	1.41	1.47	1.23	23.43	19.76	22.88	19.29
47-56	0.10	0.77	0.62	1.16	22.67	19.96	15.12	14.61
57-61	1.72	3.32	0.74	1.37	19.54	11.15	22.00	2.96
62+	2.37	3.44	3.33	1.96	23.99	19.16	20.69	9.67
All Ages	6.36	6.58	6.48	6.63	28.10	27.79	26.73	22.07
Sample Size :								
Population	45,639	34,982	27,870	28,564	38,508	30,435	24,552	25,290
Labour Force	26,166	19,984	14,895	15,170	4,075	3,219	2,827	3,038

Age	Males		Females		Age	Males		Females	
	14th Round	15th Round	14th Round	15th Round		19th Round	19th Round		
0-11	46.04	31.53	56.79	44.44	5-9	..	50.51	18.61	
12-14	30.54	27.38	49.76	55.97	10-14	..	19.21	27.15	
15	27.84	35.58	30.10	48.93	15-19	..	13.86	23.97	
16-17	19.60	23.75	56.93	35.90	20-24	..	7.26	18.55	
18-21	17.26	16.04	38.55	32.69	25-29	..	4.62	19.64	
22-26	9.71	14.55	29.24	27.83	30-39	..	1.87	12.08	
27-36	3.54	4.88	23.29	22.38	40-49	..	1.64	13.90	
37-46	1.99	1.45	18.07	15.69	50-59	..	1.02	10.86	
47-61	1.37	1.48	14.40	15.84	60+	..	2.30	9.40	
62+	5.51	3.53	10.91	17.41					
All Ages	6.97	7.78	26.09	24.29	All Ages	..	4.33	15.75	
Sample Size :					Sample Size :				
Population	18,168	18,872	16,214	16,935	Population	..	12,671	11,049	
Labour Force	9,481	9,875	1,680	1,918	Labour Force	..	6,416	1,327	

The various NSS rounds were undertaken during the time period specified below :

Round	Survey period	Reference	Period	NSS Report No.	Pages	
9	May—November, 1955	..	9	Usual Status	62	69—71
10	December, 1955—May, 1956	..	10	a year	34	97—99
11 and 12	August, 1956—August, 1957	..	11 and	One day	52	114—116
13	September, 1957—May, 1958	..	12	One day	63	51—53
14	July, 1958—June, 1959	..	13	One day	85	48—53
15	July, 1959—June, 1960	..	14	One day	169 (Draft)	24—26
19	July, 1964—June, 1965	..	14	One week	201 (Draft)	89—110
			15	One week		
			19	One week		

TABLE I  
Worker Rates (per 1000) for Females, by Age and Marital Status in Rural and Urban Areas of Maharashtra State, according to the 1961 Census

Age	Rural Maharashtra				Urban Maharashtra				Maharashtra State			
	NM	M	W	DS	NM	M	W	DS	NM	M	W	DS
All Ages	99	766	541	804	36	198	298	533	81	627	486	747
10 and Over	359	766	541	804	93	198	298	533	258	627	486	747
10—14	321	648	671	749	42	222	367	400	234	612	645	713
15—19	563	760	788	809	90	173	391	393	312	649	725	740
20—24	523	775	815	820	262	163	419	453	326	615	731	743
25—29	627	793	839	816	406	181	517	541	460	624	771	757
30—34	564	804	861	831	440	212	578	596	474	639	797	777
35—39	542	810	869	841	516	232	559	634	525	658	801	795
40—44	534	800	813	827	394	252	493	625	440	662	737	778
45—49	438	772	756	805	462	236	403	612	452	647	676	764
50—54	447	708	645	756	318	222	319	544	359	592	565	705
55—59	354	627	532	703	282	187	237	506	309	532	467	664
60—64	234	510	375	545	250	171	187	441	243	434	332	520
65—69	284	431	288	459	143	146	133	429	206	370	257	453
70+	153	306	141	288	78	103	74	314	106	262	126	292

NM—Never Married ; M—Married ; W—Widowed ; DS—Divorced and Separated.

SOURCE : Pravin Visaria. The Working Force of Maharashtra State in India, 1961, Mimeographed, p. 48.

TABLE 2  
Age-Specific Labour Force Participation rates (per 1000) for Females, by Marital Status, according to the 16th round of the National Sample Survey (1960-61) in rural and Urban India

Age	Rural India			Urban India		
	Never Married	Married	Widowed, Divorced, etc.	Never Married	Married	Widowed, Divorced, etc.
All ages	69	434	373	37	198	297
5—9	20	12	500	7	..	..
10—14	194	342	385	59	194	466
15—19	397	374	477	113	170	350
20—24	443	411	479	288	167	563
25—29	489	449	649	417	192	477
30—39	679	506	664	322	228	541
40—49	418	493	568	432	219	432
50—59	364	418	395	232	218	302
60+	178	265	153	201	109	130

SOURCE : The National Sample Survey (a) Report 103, Tables with Notes on Urban Labour Force, Sixteenth Round, July, 1960—June, 1961, Delhi, 1966, p. 18 ;

(b) Report 114, Tables with Notes on Employment and Unemployment in Rural Areas, Delhi, 1967, pp. 37-38.





सत्यमेव जयते

## APPENDIX VI

## THE FARMERS' PREFERENCE FOR WORK ON FAMILY FARMS

by

Pravin Visaria

Subject to its proper mobilization, the idle time of the millions of agricultural workers in under-developed countries for productive purposes is considered a major potential resource for accelerating the pace of capital accumulation and development. The community development programmes launched in many countries during the past two decades have been based on such a premise. In the absence of irrigation facilities permitting multiple cropping, the monsoon agriculture enjoins on a majority of the rural labour force an extended period of seasonal unemployment. The opportunity cost of labour during such period tends to be zero. Therefore it is postulated that the energies of the idle labour force could be harnessed in the task of building up community assets by appealing to the public spirit of the better off and by compensating others for their extra requirements for food and nutrition, consequent upon additional effort. In actual programmes, however, all labourers receive at least the wage current during the slack season, in recognition of the need to supplement their low incomes and poor consumption levels and to offset the preference for leisure.

2. The actual experience of the community development programme suggests, however, that many persons prefer to contribute cash rather than labour towards the cost of projects. Such contributions can be commended on the ground that they increase the resources to provide remunerative employment to the needy or the weaker section of the rural community. However, they also suggest the difficulties of a complete mobilization of the idle labour time of the rural manpower, in the frame work of a democratic society.

#### *The Experience of Rural Works Projects.*

3. In some parts of India, the implementation of rural works projects undertaken during the Third Plan has brought forth reports of shortage of labour.<sup>1</sup> While this can be explained as an erroneous selection of the project areas, it is alleged that even in areas with a high proportion of agricultural workers and single-crop cultivation, and presumably, therefore, with a high incidence of seasonal unemployment and underemployment, the requisite labourers often do not come forth to work on rural projects.

4. The explanation for this phenomenon might be a high preference for leisure or a high "reservation price". Institutional factors like the importance attached to festivals, social and religious functions also seems to be relevant. According to one study, out of 2,875 workers surveyed by the Programme Evaluation organization of the Planning Commission during its third round of the evaluation survey of rural manpower projects, almost 20 per cent did not seek employment for one or more days during the week preceding the survey, because they wanted to rest or to attend some Mela, festival or a socio-religious function<sup>2</sup>. In part, this observation arises from the absence of any clear tradition of a weekly holiday during the "busy" season and the resulting concentration of festivals and social functions in the slack season.

5. In the same category of institutional factors might be placed the considerations of status or a preference for work on the family farm. An old Indian adage eulogizes agriculture as the best or the noblest vocation, looks upon trade or industry as mediocre and denigrates employment or service as the least desirable means of livelihood. Similarly, there is some suggestive evidence that the participation of women in remunerative activity is considered permissible only in case of dire necessity. An interesting facet of the situation was brought to the author's attention during the pretest of schedules for a demographic survey, undertaken in 1966. Some respondents in a village reported that their wives worked only on the family farms, when necessary, and that normally, they had enough work in the household so that they could not work elsewhere. The pretest village is situated on the outskirts

<sup>1</sup> An interesting case of this nature was noted in Mathura District of Uttar Pradesh. See Planning Research and Action Institute, Planning Department, Uttar Pradesh, Pilot Projects in Utilization of Surplus Manpower in Rural Areas of U.P. (An Evaluation Study), Lucknow, 1962., pp. 45-48.

<sup>2</sup> See Planning Commission, Programme Evaluation Organization, Report on Evaluation of Rural Manpower Projects, 1967, pp. 15, 34.

of the Greater Bombay metropolitan area and despite the concentration of respondents in the category of cultivators, their economic status was perhaps influenced by the location of some factories in the neighbourhood. However, the response noted above was considered significant and it was decided to add a question on the willingness "to work outside own farm" to the survey schedules and collect information on the extent of prevalence of the preference for work on the family farm.

### *The Survey Outline.*

6. The survey was carried out on a sample basis in nine villages of Ratnagiri District in Maharashtra State and fourteen villages of Kutch District in Gujarat during April-June and October-November, 1966. The two districts were selected on the basis of their having experienced the slowest population growth in the respective states, both during 1951-61 and 1901-61, according to the available census statistics. The main reason for this situation was apparently heavy out-migration; and the primary objective of the survey was to study the volume and the characteristics of out-migration<sup>3</sup>. In both the districts, the survey villages were selected from four talukas reporting the highest and the lowest rate of growth in rural population during 1951-61. In addition, we also included in the survey Anjar taluka of Kutch where the urban population had increased very rapidly during the intercensal period 1951-61. The villages in each of the selected talukas were classified into three strata of small, medium and large villages, according to the number of households enumerated in each at the time of the 1961 Census. From each stratum, one village was selected at random, with a probability proportional to the number of households. Since one selected taluka in Ratnagiri did not have any large village, the number of villages selected for survey was 11 in Ratnagiri District the corresponding number for Kutch was fifteen. However, one small village in Kutch was found inaccessible. In Ratnagiri, due to the early onset of the monsoon, the field work was interrupted after seven villages had been surveyed during May-June, 1966 and because of poor communications, the field work could subsequently be completed in only two more villages<sup>4</sup>.

7. Our investigators were graduates and spoke the language of the region. After ascertaining from every respondent, who had done any work for pay or profit during the year preceding the date of interview, the details about his industry, occupation, status and place of work, the investigator asked a hypothetical question whether the person was "willing, i.e., ready to work outside his or her own farm" if an opportunity was available. Obviously, the question did not apply to those who engaged in agricultural labour or non-farm work as either primary or secondary activity. Any attempt to probe the response (Yes or No) to the question was ruled out because of the time constraint. Also, we could not specify the nature of work, the wage rate or the likely skill requirements. We admitted the hypothetical nature of the question and pleaded that we were interested in knowing whether they would or could take advantage of any opportunity for earning some income if it required their working outside their family farm.

8. Apart from the perennial problem of possible discrepancy between an expressed opinion and subsequent action, the answers to our hypothetical question are indeed subject to response errors and interviewer biases. However, they seem to indicate the preferences or the views of the respondents on work outside the family farm. The responses have been tabulated according to sex, age and caste of the respondents<sup>5</sup>. However, in the tables presented below the details according to age have not been shown because of the small number of survey respondents and the classification has been restricted to persons aged 15 years and more.

### *Worker Rates.*

9. Table 1 below provides the background in the form of worker rates for the population aged 15 or more by sex and caste. Both in Ratnagiri and Kutch one observes the inter-caste differences in female worker rates (more than 70 per cent age points) to be larger than those for males (40 points in Kutch and 23 points in Ratnagiri). In Ratnagiri villages, the Muslim females report the lowest level of work participation, the corresponding group in Kutch villages being Kutchhi Luhanas. Interestingly, the Muslim females in Kutch report quite a high level of economic activity, illustrating the possibility

<sup>3</sup> The out-migration of males explains a major part of the excess of females in the population observed in the tables below. Errors of age reporting, different for the two sexes, are also a relevant factor.

<sup>4</sup> In addition, in one village of Kutch District and two villages of Ratnagiri District, selected purposively, all households were interviewed. One other sample village of Kutch District was also studied on a census basis. The data for these four villages have been presented in Table 4.

<sup>5</sup> The classification is not strictly according to caste since the Muslims constitute a religious group.

that space or the region might be a more important determinant of the practices regarding work participation than religion. Luhanas in Kutch are a trading caste with heavy out-migration, reflected partly in the sex ratio of the fifteen-plus population of the caste. The very low level of work participation among the Brahmin and Garashiya females is due to the customary confinement of Garashiya women to domestic work<sup>6</sup>. The relatively low level of work participation by males of some caste groups is believed to be due to a probable high selection, in terms of age and physical fitness, of those residing in these villages. Nearly one-third of Visa Oswal males aged 15 years or more (sixteen per cent of those of all ages) residing in the surveyed villages were above age 60. Similarly among Muslim males in Ratnagiri villages, those aged 60 or more formed over 31 per cent of the population above 15 and 13.9 per cent of that of all ages.

### *The Occupational Distribution of Workers.*

10. Tables 2 and 3 show the distribution of workers of each caste and sex by primary occupation, and for farmers, by willingness to work outside the family farm, for Ratnagiri and Kutch villages. Table 4 shows the data for the four villages where all households were surveyed, although because of small numbers a tabulation by caste was not possible.

11. The broad occupational distribution of workers in 9 villages of Ratnagiri and 14 villages of Kutch is consistent with the known general ranking of the various caste groups. The proportion of agricultural labourers among male workers appears to be a fairly good indicator of the relative status of a caste group. The Harijans (including neo-Buddhists) and the Tillori Kunbis indeed constitute the most disadvantaged sections in Ratnagiri villages. However, the importance of non-farm activity among the Muslim workers surveyed in Kutch villages, does not necessarily, reflect their status, essentially as animal husbandman, artisans and craftsmen. For some of the caste groups in Kutch the small number of observations induces caution in interpretation. However, a high proportion of Mistry male and female workers report agricultural labour as their occupation because the irrigated farms in the villages where they are concentrated, offered opportunities for such work during a major portion of the year, thereby making it their primary occupation.

12. The data for four villages shown in Table 4 are broadly consistent with those presented in Tables 1, 2 and 3. The female worker rates reported for Purnagadh and for Kojachora and Chhashara are lower than for other villages of Ratnagiri and Kutch, respectively. In the case of Kojachora and Chhashara, the caste composition of the resident population is the explanation for this difference. Both villages have a significant proportion of those castes for which the female worker rates shown in Table 1 are low. The high proportion of non-farm occupations among male workers of Purnagadh is due to the importance of fishing in this coastal village. In Chhashara, the greater importance of non-farm occupations among male workers (than in 14 survey villages of Kutch) is probably because of a high proportion of households belonging to the trading caste of Visa Oswal Vaniyas whose general prosperity perhaps increases the demand for services.

### *Willingness to Work outside the Family Farm.*

13. As noted above, the question on willingness "to work outside own farm" is applicable only to those who do not already do so, as their primary or secondary activity. According to Table 2, over 54 per cent of the male farmers and almost two-thirds of the female farmers in Ratnagiri District expressed an unwillingness to work outside their own farm. The corresponding percentages for Kutch villages (Table 3) were even higher, almost 80 per cent for male farmers and 84 per cent for female farmers. Consistently with what we might expect there were marked differentials according to caste, although the problem of small number of observations for some castes justifies greater caution on this point.

<sup>6</sup>The Garashiya, a Kahatriya caste, derive their name from the receipt of land from the various rulers as a token of gratitude for past services or as relations. Most of the Garashiya in Kutch are Jadejas, related to the family that ruled Kutch until its merger with the Indian Union in 1948. The justification for our grouping of Brahmins with Garashiya lies in the small number of the former and the close ranks of the two groups in the caste hierarchy. In the surveyed population as a whole, there were only 93 Brahmins (42 males) and 277 Garashiya (129 males).

<sup>7</sup>Some Garashiya women told one of our investigators that even though their economic condition does not warrant their sitting idle at home, the bonds of custom are too strong to be brushed aside. They expressed keen desire for Ambar Charkhas to supplement their means of livelihood. The caste has yet to adjust to the change in its status following the Independence of India and the merger of native states.

14. In the four villages surveyed on the basis of complete enumeration, the proportion of farmers unwilling to work outside their own farms was a little higher than the corresponding proportion reported for other villages of Ratnagiri and Kutch. However, in view of the small number of cases, the broad consistency of the data seems more important than the small differences.

#### *Limitations of the data.*

15. In interpreting these data, several other factors need to be kept in mind. First, the farmers unwilling to work on others' farms might well have larger holdings than those more flexible in this respect. The small proportion of Harijan farmers reporting preference for work on the family farm suggests such a hypothesis because the Harijans normally have very small farms. However, it is necessary to reprocess the data to assess the association between farm size and the responses to the question under consideration.

16. Secondly, as noted earlier, the preference for work on the family farm among female farmers is probably a function of their pre-occupation with household chores. The well-known association between the economic status of a person and the area and materials of his house in rural India implies that females from better-off families might have larger houses to take care of. The probable higher survivorship rate of children in the families of higher economic status would add to the number of living children and therefore to the chores of child-rearing<sup>a</sup>.

17. This possibility can be assessed in the light of Table 5 which shows the data on the average number of children surviving for female farmers according to their marital status and willingness to work outside the family farm. While in the fourteen villages of Kutch District, the number of surviving children for women unwilling to work outside the family farm was a little higher than that of willing females, in the nine villages of Ratnagiri the reverse was true, particularly in the case of currently married female farmers. The data for four villages, studied on a census basis, are presented only for the sake of completeness and should be looked at with due reservation because of the small number of cases. It is, however, interesting that the data on currently married females in Khalgaon village of Ratnagiri District show a higher number of surviving children for female farmers unwilling to work on the family farm than for those willing to do so. This is contrary to the impression conveyed by the data for nine villages of Ratnagiri. *Prima facie*, therefore, the available data do not indicate anything conclusive about the association between the number of surviving children and willingness to work outside the family farm. It is necessary to refine Table 4 to take account of the possible differences in the age composition of the females who reported willingness or otherwise to work outside the family farm, but the relevant data are yet to be compiled.

18. Thirdly, the prominence of out-migration in both the survey districts implies the possibility that most resident farmers unwilling to work outside their own farms might have an alternative means of support in the form of remittances from family members and/or past savings. However, such a hypothesis is consistent with the view that persons with adequate means of livelihood may not like to use their idle labour time to supplement their income. In other words, they have a high preference for leisure. The considerations of status might only be a crystallized expression of such a preference.

19. On the whole, there is a good case for a detailed study of the apparently widespread preference for work on the family farm. While the data presented above are drawn from only two districts of Western India, their features probably extend to other parts of India as well. Various Rounds of the NSS have reported a significant proportion of the gainfully employed, both in urban and rural India, to be working less than 28 hours per week but not available for additional work. Some of these data are shown below in Table 6. While the available data preclude a firm conclusion, it seems possible that a large number of these persons are part-time members of the labour force who work only on their family farms to meet the peak demand for labour or are not interested in work elsewhere.

#### *The Implications of the Apparent Preference.*

20. In so far as the apparent preference for work on the family farm is present, the fuller utilization of the labour time of a significant section of India's labour force is contingent on the adoption

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<sup>a</sup>During the 18th Round of the National Sample Survey (February, 1963—January, 1964) in rural India, the crude death rate for households reporting agricultural labour as their occupation was observed to be 13.45 per 1,000 while that for cultivators was 11.78. See : The N.S.S. Report No. 197 (Draft), *Tables with Notes on Differential Fertility and Mortality Rates in India*, p. 40. Both these rates are probably underestimated and they have not been standardized for age composition. However, the direction of the difference seems correct.

of more intensive agriculture in the form of multiple cropping. For a long time to come, such an increase in the frequency of crops is likely to be restricted to irrigated lands. A part of the labour resources of India may, therefore, remain unused for a long time.

21. It follows also that the role of rural works projects in promoting the use of India's idle manpower will be limited to some segments of the community like agricultural labourers or small farmers who feel an urgent need to supplement their incomes. The existing preferences could, in fact, be helpful in permitting the available financial resources for creating additional work opportunities to be devoted to the most needy.

22. Finally, the data presented above should warn the analysts against assuming all members of the labour force to be equally attached to economic activity. The workers as well as work-seekers who demand or need additional work in a specific location will not take advantage of opportunities created elsewhere. In the jargon of economics, this may be looked upon as a case of imperfections of the labour market. But it illustrates the unrealistic nature of the estimates of unemployment based on a comparison of the net additions to the labour force during a period and the guesses about the employment potential of corresponding investment and other expenditure, calculated partly in man-years.

TABLE I

*Worker Rates for Population Aged 15 Years and Over, by Sex and Caste, 1966 Survey*

(a) Nine villages of Ratnagiri District				(b) Fourteen villages of Kutch District			
Sex Caste		Males	Females	Sex Caste		Males	Females
All	..	78.04 (631)	60.89 (1,102)	All	..	87.41 (969)	52.18 (1,309)
Maratha	..	77.06 (218)	67.73 (375)	Vira Oswal	..	56.25 (64)	27.05 (122)
Muslim	..	65.71 (35)	67.89 (114)	Kutohi	..	94.44 (18)	5.88 (85)
Bhandari	..	76.64 (137)	56.97 (251)	Luhana	..		
Tilhari	..	88.24 (102)	80.31 (193)	Mistry	..	80.00 (50)	63.24 (68)
Kunbi	..			Leuva Patel	..	82.04 (167)	73.89 (314)
Harijan	..	80.36 (56)	75.00 (68)	Kadva	..	91.35 (104)	80.99 (121)
Other	..	75.90 (83)	58.42 (101)	Patel	..		
				Brahmin and	..	89.09 (110)	11.50 (113)
				Garashiya	..		
				Ahr, Sanger and	..	95.05 (101)	67.35 (98)
				Barot	..		
				Muslim including	..	91.37 (116)	43.51 (131)
				Veras	..		
				Harijan	..	96.58 (117)	58.09 (136)
				Other	..	89.34 (122)	47.11 (121)

NOTE.—Figures in parentheses report the number of persons aged 15 and over and belonging to the specified caste and sex, among the surveyed households.

TABLE 2

*The Percentage Distribution (1) of Workers Aged 15 Years and Over According to Broad Occupation and (2) of Farmers According to Willingness to work Outside Their Own Farms, by Caste and Sex, Nine Villages and Ratnagiri, 1966 Survey*

Caste		Workers by Occupation			All	Farmers by Willingness to Work Outside Own Farms		
		Farming	Agri-cultural Labour	Non-Farm Work		Willing	Unwilling	All
MALES								
All	..	70.75 (312)	21.09 (93)	8.16 (36)	100.00 (441)	45.51 (142)	54.49 (170)	100.00 (312)
Maratha	..	82.24 (125)	14.45 (22)	3.29 (5)	99.98 (152)	52.00 (65)	48.00 (60)	100.00 (125)
Muslim	..	60.87 (14)	13.04 (3)	26.09 (6)	100.00 (23)	28.57 (4)	71.42 (10)	99.99 (14)
Bhandari	..	78.41 (69)	17.05 (15)	4.55 (4)	100.01 (88)	42.03 (29)	57.97 (40)	100.00 (69)
Tillori Kunbi	..	65.00 (52)	27.50 (22)	7.50 (6)	100.00 (80)	48.08 (25)	51.92 (27)	100.00 (52)
Harijan	..	26.19 (11)	66.66 (28)	7.14 (3)	99.99 (42)	81.82 (9)	18.18 (2)	100.00 (11)
Other	..	73.21 (41)	5.36 (3)	21.43 (12)	100.00 (56)	24.39 (10)	75.61 (31)	100.00 (41)
FEMALE MALES								
All	..	73.42 (442)	24.58 (148)	1.99 (12)	99.99 (602)	34.61 (153)	65.38 (289)	99.99 (442)
Maratha	..	83.04 (186)	15.63 (35)	1.34 (3)	100.01 (224)	37.10 (69)	62.90 (117)	100.00 (186)
Muslim	..	88.89 (8)	11.11 (1)	0.00 (0)	100.00 (9)	25.00 (2)	75.00 (6)	100.00 (8)
Bhandari	..	78.05 (96)	18.70 (23)	3.25 (4)	100.00 (123)	19.79 (19)	80.21 (77)	100.00 (96)
Tillori Kunbi	..	61.54 (88)	37.76 (54)	0.70 (1)	100.00 (143)	45.45 (40)	54.55 (48)	100.00 (88)
Harijan	..	38.78 (19)	61.22 (30)	0.00 (0)	100.00 (49)	52.63 (10)	47.37 (9)	100.00 (19)
Other	..	83.33 (45)	9.26 (5)	7.41 (4)	100.00 (54)	28.89 (13)	71.11 (32)	100.00 (45)

NOTE.—Figures in parentheses report the number of persons observed in each category.

TABLE 3

*The Percentage Distribution of Workers Aged 15 Years and Over According to Broad Occupation and (2) of Farmers According to Willingness to Work Outside Their Own Farms, by Caste and Sex, Fourteen Villages of Kutch District in Gujarat, 1966 Survey*

Caste	Workers by Occupation			All	Farmers by Willingness to Work Outside Own Farms		
	Farming	Agricultural Labour	Non-Farm Work		Willing	Unwilling	All
MALES							
All	45.79 (337)	25.95 (191)	28.26 (208)	100.00 (736)	20.47 (69)	79.53 (268)	100.00 (337)
Visa Oswal Vaniya	63.64 (21)	12.12 (4)	24.24 (8)	100.00 (33)	4.76 (1)	95.24 (20)	100.00 (21)
Kutchhi Lahana	33.33 (5)	13.33 (2)	53.33 (8)	99.99 (15)	20.00 (1)	80.00 (4)	100.00 (5)
Mistry	46.15 (18)	43.59 (17)	10.26 (4)	100.00 (39)	16.67 (3)	83.33 (15)	100.00 (18)
Louva Patel	53.60 (67)	31.20 (39)	15.20 (19)	100.00 (125)	20.90 (14)	79.10 (53)	100.00 (67)
Kadva Patel	78.67 (59)	12.00 (9)	9.33 (7)	100.00 (75)	6.78 (4)	93.22 (55)	100.00 (59)
Brahmin and Garashiya	55.41 (41)	12.16 (9)	32.43 (24)	100.00 (74)	26.83 (11)	73.17 (30)	100.00 (41)
Ahir, Sangar and Barot	67.50 (54)	22.50 (18)	10.00 (8)	100.00 (80)	18.52 (10)	81.48 (44)	100.00 (54)
Muslim including Votas	23.23 (23)	25.25 (25)	51.52 (51)	100.00 (99)	30.43 (7)	69.57 (16)	100.00 (23)
Harijan	25.74 (26)	45.54 (46)	28.71 (29)	99.99 (101)	53.85 (14)	46.15 (12)	100.00 (26)
Other	24.21 (23)	23.16 (22)	52.63 (50)	100.00 (95)	17.39 (4)	82.61 (19)	100.00 (23)
FEMALES							
All	46.29 (287)	44.35 (275)	9.35 (58)	99.99 (620)	16.03 (46)	83.97 (241)	100.00 (28)
Visa Oswal Vaniya	66.67 (20)	20.00 (6)	13.33 (4)	100.00 (30)	5.00 (1)	95.00 (19)	100.00 (20)
Kutchhi Lahana	80.00 (4)	0.00 (0)	20.00 (1)	100.00 (5)	75.00 (3)	25.00 (1)	100.00 (4)
Mistry	25.58 (11)	65.12 (287)	9.30 (4)	100.00 (43)	0.00 (0)	100.00 (11)	100.00 (11)
Louva Patel	42.47 (93)	56.16 (123)	1.37 (3)	100.00 (219)	20.43 (19)	79.57 (74)	100.00 (93)
Kadva Patel	78.31 (65)	21.69 (18)	0.00 (0)	100.00 (83)	7.69 (5)	92.31 (60)	100.00 (65)
Brahmin and Garashiya	41.67 (5)	16.67 (2)	41.67 (5)	100.01 (12)	0.00 (0)	100.00 (5)	100.00 (5)



TABLE 3—(Concl'd.)

Caste	Workers by Occupation			All	Farmers by Willingness to Work Outside Own Farms		
	Farming	Agricultural Labour	Non-Farm Work		Willing	Unwilling	All
FEMALES— <i>Concl'd</i>							
Ahir, Sangar and Barot ..	70.69 (41)	27.59 (16)	1.72 (1)	100.01 (58)	19.51 (8)	80.49 (33)	100.00 (41)
Muslim including Veras ..	26.92 (14)	34.62 (18)	38.46 (20)	100.00 (52)	14.29 (2)	85.71 (12)	100.00 (14)
Harijan ..	21.13 (15)	64.79 (46)	14.08 (10)	100.00 (71)	33.33 (5)	66.67 (10)	100.00 (15)
Others ..	40.43 (19)	38.30 (18)	21.28 (10)	100.01 (47)	15.70 (3)	84.21 (16)	100.00 (19)

NOTE.—Figures in Parentheses report the number of persons observed in each category.

TABLE 4

*Worker Rates, Distribution of Workers According to Broad Occupation and the Distribution of Farmers According to Willingness to Work Outside Their own Farms, for Population Aged 15 Years and over, by Sex, for Specified Villages, 1966 Survey*

Sex	Worker Rate for Population 15 +	Workers by Occupation				Farmers by Willingness to Work Outside Own Farms			
		Farming	Agricultural Labour	Non- Farm Work	All Workers	Willing	Unwilling	All Farmers	
Village : PURNAGAD (Ratanagiri District)									
Males	..	78.57 (126)	37.84 (28)	17.57 (13)	44.59 (33)	100.00 (74)	35.71 (10)	64.29 (18)	100.00 (28)
Females	..	49.09 (165)	59.68 (37)	30.65 (19)	9.68 (6)	100.01 (62)	35.14 (13)	64.86 (24)	100.00 (37)
Village : KHALGAON (Ratanagiri District)									
Males	..	82.97 (276)	57.06 (93)	14.11 (23)	28.83 (47)	100.00 (163)	26.88 (25)	73.12 (68)	100.00 (93)
Females	..	67.12 (444)	82.26 (153)	12.90 (24)	4.84 (9)	100.00 (186)	26.14 (40)	73.86 (113)	100.00 (153)
Village : KOJACHORA (Kutch District)									
Males	..	95.36 (151)	14.29 (11)	58.44 (45)	27.27 (21)	100.00 (77)	9.09 (1)	90.90 (10)	99.99 (11)
Females	..	43.54 (147)	22.22 (10)	51.11 (23)	26.67 (12)	100.00 (45)	20.00 (2)	80.00 (8)	100.00 (10)
Village : CHHASHARA (Kutch District)									
Males	..	84.46 (193)	10.52 (12)	44.74 (51)	44.74 (51)	100.00 (114)	16.67 (2)	83.33 (10)	100.00 (12)
Females	..	42.33 (300)	30.34 (27)	42.69 (38)	26.97 (24)	100.00 (89)	7.41 (2)	92.59 (25)	100.00 (27)

NOTE.—(1) Figures in parentheses report the number of persons observed in each category.

(2) Figures on all workers by occupation exclude those not reporting a specific occupation and may not always tally with the number expected by multiplying the worker rate with population.

TABLE 5

*The average number of children surviving for ever married females, aged 15 years and over and working as farmers in specified villages, according to willingness to work outside the family farm, 1966 Survey*

Village(s)/District	Marital Status*	Willing to work		Unwilling to work		All	
		Number of Females	Surviving Children	Number of Females	Surviving Children	Number of Females	Surviving Children
Fourteen villages of Kutch ...	E.M.	41	3.12	228	3.44	269	3.39
	C.M.	33	3.18	206	3.44	239	3.40
	W.D.S.	8	2.87	22	3.42	30	3.27
Nine villages of Ratnagiri ..	E.M.	138	2.74	252	2.71	390	2.72
	C.M.	107	2.89	191	2.83	298	2.85
	W.D.S.	31	2.22	61	2.32	92	2.29
Chhashara (Kutch District) ..	E.M.	2	3.50	24	3.20	26	3.23
	C.M.	..	..	18	3.22	18	3.22
	W.D.S.	2	3.50	6	3.16	8	3.25
Kojachora (Kutch District) ..	E.M.	2	4.50	8	3.75	10	3.90
	C.M.	2	4.50	8	3.75	10	3.90
	W.D.S.	..	..	..	..	..	..
Khalgaon (Ratnagiri District)	E.M.	40	1.62	113	2.00	153	1.90
	C.M.	38	1.55	99	2.01	137	1.88
	W.D.S.	2	3.00	14	1.92	16	2.06
Purnagad (Ratnagiri District)	E.M.	12	2.83	21	3.14	33	3.03
	C.M.	11	2.36	15	3.53	26	3.03
	W.D.S.	1	8.00	6	2.16	7	3.00

\*E.M. : Ever Married.

C.M. : Currently Married.

W.D.S. : Widowed, Divorced and Separated.

TABLE 6

*Persons, who worked for 28 hours or less per week, but reported non-availability for additional work, as per cent of the gainfully employed population of the Relevant sex, in rural and urban India, according to the National Sample Survey Data for specified rounds*

Round		Rural		Urban	
		Male	Female	Male	Female
9th	..	13.12	36.05	9.66	32.36
10th	..	15.74	41.68	9.93	34.31
13th*	..	..	..	7.14	23.41
14th	..	12.35	28.29	9.21	28.26
16th	..	17.95	22.17	..	..

The various N.S.S. rounds were undertaken during the time specified below :—

Round	Survey Period	Reference Period	N.S.S. Report No.	Pages
9th	May—November, 1955 ..	Usual status/a year	62	61, 65, 221-2
10th	December, 1955—May, 1956 ;	One Day	34	86-87, 135-136
13th	September, 1957—May, 1958	One Day	63	117-118
14th	July, 1958—June, 1959 ..	One Week	85	127, 130
14th	July, 1958—June, 1959 ..	One week	100	154-5, 175-6
16th	July, 1960—June, 1961 ..	One week	114	170, 176

\*It is arbitrarily assumed that persons for whom hours of availability were not recorded" included mainly those who were in the zero availability group, a column which is left blank.

## APPENDIX VII

## LONG TERM CHANGES IN THE INDUSTRIAL DISTRIBUTION OF THE WORKING FORCE IN THE INDIAN UNION AND THE STATES: 1901—1961.

By

J. Krishnamurty

Any attempt to make comparisons over time, of changes in the industrial distribution of India's working force, is beset by a number of problems of comparability in the concepts and procedures employed by the different decennial censuses conducted in India. The concept of economically active population or working force is by no means a pure or a simple one.<sup>1</sup> The size of the working force may well vary from census to census due to differences in concepts or due to differences in actual procedures of data collection, or due to some combination of both. This problem is most serious in the case of female workers whose movement, from one census to another, into and out of the work force may merely reflect a wide variety of conceptual and procedural changes—intentional or unintentional—that have taken place. In addition the classification of the working force by branch of economic activity also raises problems of comparability of the classification schemes adopted in each census. In practice, the problems of the concept of work and the classification of work are interlinked. For example, a very narrow definition of economic activity would not merely reduce the size of the working force, but would also tend to underestimate the number of workers in sectors like agriculture where the distinction between economic and non-economic activity is often extremely imprecise.

2. The problems of comparability are perhaps the thorniest in the two recent censuses of 1951 and 1961. About the 1951 census, it has been argued that the emphasis on income rather than work as the criterion of economic activity led to an under-enumeration of the working force in general and particularly of the working force in agriculture. This was because unpaid family workers, i.e., those who receive no explicit income in cash or in kind, were excluded (wholly or partially) from the working force. Doubts have been expressed on whether the under-enumeration of unpaid family workers was (a) due to errors in instructions or to errors in interpretation of the instructions: (b) general, or just restricted to the States of Andhra Pradesh, Madras and Mysore.<sup>2</sup>

3. In 1951, a detailed classification of economic activity was provided only for "self-supporting persons". For "earning dependants"<sup>3</sup> only a very broad classification was used. It is necessary to make some assumptions for distributing "earning dependants" among the different industrial sub-groups. Some degree of arbitrariness is unavoidable in such a process, but it does seem that the procedure of distributing the earning dependants of 1951 on the basis of the pattern of distribution of "family workers" in 1961, is open to question<sup>4</sup>. A better method would be to use the data available for three States, Uttar Pradesh, Mysore and West Bengal, where "earning dependants" were classified in detail in 1951 by their branch of economic activity,<sup>5</sup> to obtain the distribution of earning dependants within the broad classes in which they were divided by the 1951 census.

4. Most of the objections raised about the 1961 census have been regarding the concept of working force used therein. It has been argued that the 1961 census had a very generous concept of work. Even those who worked for one hour a day for the major part of the working season (which might be quite short) were to be regarded as workers.

<sup>1</sup>In the economically active population we include all those who work for pay or profit, in cash or in kind, including unpaid family workers in agriculture, as also subsistence farmers. At the same time we exclude those who produce non-agricultural products for their own (or their household's) consumption. Thus we include restaurant services but exclude pure housewives.

<sup>2</sup>See for e.g. Alice Thorner: "Working Force Size and Structure in India, 1951": "A Regional Analysis of Census and Sample Survey Data", *Sankhya*, Series B, Vol. 25, November, 1963. Also J. N. Sinha, "Comparability of 1961 and 1951 Census Economic Data", *Artha Vijnana*, Vol. 6, No. 4, December 1964, and P.M. Visaria's "Comment" and Sinha's "Rejoinder", in *Artha Vijnana*, Vol. 7, No. 3 and No. 4.

<sup>3</sup>According to the 1951 census a self-supporting person was one who earned enough to at least support himself, an Earning Dependant was one who earned a small income in cash or in kind (including unpaid income) not enough to support himself. The rest of the population consisted of Non-Earning Dependents.

<sup>4</sup>See Sinha, *Artha Vijnana*, December 1964, *op. cit.*

<sup>5</sup>See Sinha, *op. cit.*, also see Alice Thorner, "Secular Trend of the Indian Economy", 1881, 1951, *Economic Weekly*.

5. Certainly, the rise in the participation rate between 1951 and 1961 appears too high, even if one accepts the view that the 1951 rate was unduly low. The age structure of the Indian population and changes in it between 1951 and 1961 do not explain the rise in the participation rate, since the proportion in the age group 15—64 fell from 58.5 to 56.0 per cent over the period<sup>6</sup>. Unfortunately, we do not have age-group specific participation rates for 1951, since the age distribution of workers was not separately tabulated. One could argue that changes in age composition between 1951 and 1961 due to rapid population growth and decline in mortality, combined with increases in school enrolments should have lowered the participation rate<sup>7</sup>. On the other hand, it has been argued that land reform and increased employment opportunities have operated to raise the participation rate<sup>8</sup>. It is not possible to make any final judgement on this issue, since adequate evidence is not available.

6. What is not always realized is that the 1961 Census imparts a distortion to the data collected on the industrial distribution of the working force on account of the use of the so-called "two-pronged" reference period. In the case of agriculture, livestock, dairying, household industry etc., a person who worked for at least one hour a day for the major part of the working season was deemed a worker, while in case of trade, professions, services, business or commerce, only those engaged in this activity in the preceding fifteen days were regarded as workers. In effect, this meant that there was a 'usual status' definition for part of the working force, and a current 'status' definition for the rest of the working force. The implicit assumption that seasonality is a characteristic only of agriculture, livestock, dairying and household industry is a very doubtful one.

7. The "two pronged" reference period, could have led to an over-estimation of the numbers in agriculture and an under-estimation of the numbers in services. In this connection it is significant that the share of trade and commerce in the male working force declined in every State in 1961 when compared to 1951.

8. Since it is not clear whether (1) the working force in 1951 was under-estimated in some regions or in the whole of India, (2) the under-estimation was primarily in agriculture or it was more general, and (3) the very generous definition of the work in the 1961 Census led to an overstatement of the working force in general, or more particularly in agriculture, the data available on the size and the industrial composition of the working force in 1951 and 1961 do not lend themselves to an analysis of the actual changes during this period without serious mental reservations.

9. It is interesting, however, to compare participation rates over the period 1911—1961 for the different States. If, for instance, we take the participation rates derived from the 1911 Census, a Census in which work was quite clearly the criterion of economic activity and a year that was fairly normal—we find that in most States there was a decline between 1911 and 1961 in the participation rates. For males, in Punjab, Rajasthan, Uttar Pradesh, West Bengal, Assam and Madhya Pradesh, there was a decline between 1911 and 1951 as well as between 1951 and 1961 (See Table 2). In the case of females, in Gujarat, Rajasthan, Uttar Pradesh and West Bengal there was a similar decline between 1911, 1951 and 1961 (See Table 3). In Mysore, there was a decline in both male and female participation rates between 1911 and 1951, but the 1961 participation rate was the highest recorded over the period. In Orissa, in the case of males alone was the 1961 participation rate higher than in 1911. Broadly speaking, therefore, in almost all States there was a decline in the participation rates between 1911 and 1961. To what extent, this was due to rapid population growth (leading to an increased proportion of the population belonging to the younger age groups) and to what extent it reflected a decline in the age-sex specific participation rates cannot be determined in the absence of age-sex specific participation rates for the period before 1961.

<sup>6</sup>See Ashish Bose (ed). *Patterns of Population Change in India*. 1950—61, p. 391.

<sup>7</sup>P.M. Visaria, *The Working Force of Maharashtra State in India*, 1961. (Mimeograph), p. 139.

<sup>8</sup>J.N. Sinha, "Rejoinder", *Artha Vijnana*, Vol. 7 No. 4.

TABLE 1  
Participation Rates for India for Males and Females in 1951 and 1961 under Different Assumptions  
(per cent)

	1951 Census	1961 Census	1951+ (Visaria)	1951+ (excluding Madras, Mysore and Andhra Pradesh)	1961* (excluding Madras, Mysore, and Andhra Pradesh)
Males	.. 54.04	57.12	58.5	55.58	56.22
Females	.. 23.31	27.96	28.5	25.33	25.66

+ Visaria's estimate was obtained by applying the 1961 age-group specific participation rates on the 1951 actual age distribution of population (unsmoothed). See, Visaria in *Artha Vijnana*, September, 1965.

\* Sinha's estimates, *Artha Vijnana*, December, 1964.

10. Taking India as a whole, the declining trend in the participation rate is clear both for males and females, though the 1951 rate appears exceptional. The male participation rate declines from 62 per cent to 57 per cent and that for females, from 34 per cent to 28 per cent between 1911 and 1961.

TABLE 2  
The Trend in Participation Rates (percentages) 1911, 1951 and 1961. (Males only)

	1911	1951	1961
Andhra Pradesh	62.5	52.6	62.2
Assam	62.1	54.4	54.3
Bihar	62.5	49.1	55.6
Gujarat	58.6	51.7	53.5
Jammu and Kashmir	59.5	N.A.	57.8
Kerala	53.6	46.7	47.2
Madhya Pradesh	64.7	60.4	60.2
Madras	60.6	45.7	59.7
Maharashtra	62.5	56.8	57.1
Mysore	54.9	49.6	58.4
Punjab	60.1	54.9	52.9
Rajasthan	63.5	59.5	58.1
Uttar Pradesh	65.1	59.7	58.1
West Bengal	62.9	54.2	54.0
India	62.0	54.3	57.1
Orissa	60.6	56.3	60.8

SOURCE: -- Census of India, 1961, Paper No. 1 of 1967.

Table 3  
The Trend in Participation Rates (percentages) 1911, 1951, and 1961 (females only)

	1911	1951	1961
Andhra Pradesh	.. 41.6	21.2	41.3
Assam	.. 39.0	30.7	31.8
Bihar	.. 34.7	20.7	27.1
Gujarat	.. 30.0	28.0	27.9
Jammu and Kashmir	.. 33.7	N.A.	25.6
Kerala	.. 28.0	18.1	19.7
Madhya Pradesh	.. 47.9	37.9	44.0
Madras	.. 36.5	12.7	31.3
Maharashtra	.. 39.8	33.3	38.1
Orissa	.. 30.4	18.8	26.6
Rajasthan	.. 45.4	38.3	35.9
Uttar Pradesh	.. 33.3	23.6	18.1
West Bengal	.. 18.8	11.6	9.4
India	.. 33.9	23.3	28.0
Mysore	.. 25.3	18.1	32.0
Punjab	.. 11.9	17.2	14.2

SOURCE: -- Census of India, 1961, Paper No. 1 of 1967.

11. For the same reason that participation rates for 1951 and 1961 are not quite comparable, the changes in the industrial distribution of the working force recorded by the Census of 1951 and 1961 may be very misleading. If however we take the period 1911—1961, the presence (or absence) of sustained changes in the industrial distribution can be better investigated.

12. For this purpose we have used the figures provided by the Office of the Registrar General in which the data collected through the Census of 1901, 1911, 1921, 1931 and 1951 have been recast according to the 1961 Indian Standard Industrial Classification keeping in mind the requirements of broad comparability. In addition, certain adjustments have been made here to the data, by distributing all 'unspecified' categories among some of the existing industrial divisions and major groups.<sup>9</sup>

13. In Table 4, the percentage distribution of the Indian working force by broad division is presented for the period 1901—61. The data for the female working force cannot be relied on (being much more sensitive to changes in concepts and procedures from one census to another), and so only the data for the male working force is taken into account. From Table 4 it will be obvious that, between 1911<sup>10</sup> and 1961, the share of agriculture was between 70-74%, that of manufacturing between 9 and 11% and of services between 15 and 17% of the working force. In other words, in the country taken as a whole, there has been very little change in the industrial distribution of the male working force. The only sector that has recorded a fairly sustained rise in its percentage share is 'Transport, Storage and Communications'.

TABLE 4

*Percentage Distribution of the Working Force in India, 1901—1961 (Males)*

	1901	1911	1921	1931	1951	1961
1. Cultivators ..	49.9	51.8	54.6	50.8	51.9	51.3
2. Agricultural Labour ..	15.9	16.8	15.3	18.2	17.4	16.7
3. Plantations, Forestry, Fishing, etc ..	4.5	5.0	4.5	5.0	2.4	3.7
4. Mining and Quarrying ..	0.1	0.2	0.3	0.3	0.5	0.6
5. Manufacturing ..	10.4	9.5	9.2	8.9	9.7	10.1
6. Construction ..	1.1	1.2	1.1	1.3	1.3	1.7
7. Elec. Gas, Water Supply ..	0.5	0.5	0.4	0.4	0.4	0.4
8. Trade and Commerce ..	5.7	5.5	5.8	5.7	6.2	5.3
9. Transport, Storage and Communications	1.5	1.5	1.2	1.3	2.0	2.3
10. Other Services ..	10.7	8.0	7.6	8.2	8.2	7.9
Total ..	100.0	100.0	100.0	100.0	100.0	100.0

<sup>9</sup>We have distributed most of the 'unspecified' components *pro rata* between agricultural labour, construction and certain branches of services. For details, and for a fuller discussion of the problems of comparability of Census data, see J. Krishnamurty, "Trends in the Industrial Distribution of the Working Force in India, 1901—1961" working paper No. 50, Delhi School of Economics, Delhi, 1968.

<sup>10</sup>The figures for 1901 appear to have been effected by specific efforts to cover the handicrafts sector. 1911 appears to have been a fairly normal year and an efficient census with a definition of work like the 1961 definition.

TABLE 5

*Rates of Growth of Agricultural Output and Shares of Agriculture in the Work Force  
1951 and 1961 State-wise*

		Rate of growth of Agricultural Output %	Percentage share of Agriculture in the Work Force		
			1951	1961	Increase or decrease in share
1. Punjab	..	5.14	67.4	63.7	(—)
2. Madhya Pradesh	..	4.07	77.3	75.4	(—)
3. Rajasthan	..	4.20	71.8	73.9	+
4. Kerala	..	4.08	51.0	45.4	(—)
5. Gujarat	..	4.53	59.7	64.1	+
6. Maharashtra	..	3.07	61.7	60.2	(—)
7. Bihar	..	2.42	84.9	76.2	(—)
8. Uttar Pradesh	..	2.20	74.0	75.7	+
9. Assam	..	1.24	69.3	70.6	+
10. Orissa	..	1.05	79.2	81.7	+
11. West Bengal	..	0.21	54.0	56.3	+
12. Madras	..	5.12	60.7	61.1	+
13. Andhra Pradesh	..	3.05	67.1	65.7	(—)
14. Mysore	..	4.36	68.6	68.6	+
India	..	3.57	69.3	68.0	(—)

SOURCE: Rates of Agricultural Growth are from B.S. Minhas and A. Vaidyanathan "Growth of Cop-output in India, 1951—54 to 1958—61", Journal of the Indian Society of Agricultural Statistics 1965 Rates related to 1951—54 to 1958—61, but for Gujarat, Mysore, Rajasthan and Kerala, 1952—54 was base.

14. At a more disaggregated level, however, some trends are discernible. In manufacturing, between 1901 and 1951 factory employment grew, partly at the expense of non-factory employment. Changes in the composition of manufacturing employment suggest that there was a shift to new products and to improved technology which raised average output per worker in manufacturing and possibility per capita manufacturing output as well.<sup>11</sup> In the services sectors, too, important activities like electricity and gas, wholesale and retail trade, transport, communications, educational scientific, medical, health and legal services witnessed significant expansion during the period 1901—1951.

15. The period 1901—1951 was nevertheless one in which changes in the industrial distribution of the working force were not very conspicuous, though quite significant in some cases at a disaggregated level. There was a change, but none indicative of a major structural transformation.

16. For the 1951—1961 period, as mentioned earlier, the problems of comparability are serious. We can hazard only two significant pointers to the process of change during that decade. First, though we cannot say whether the share of agriculture in the working force rose or fell, it would appear that the share in agriculture generally fell in those States where agricultural output grew rapidly, and rose in those States where agricultural output grew slowly (see Table 5). Also, unlike the 1901—1951 period, non-factory employment within the manufacturing sector appears to have grown faster than factory employment during the decade 1951—1961.<sup>12</sup> This was due probably to the slow growth of factory employment in textile production resulting from technological changes and the governmental policy of restricting the growth of factory textiles in the interest of *Khadi* and handloom production.

<sup>11</sup>See T. Krishnamurty, op. cit. pp. 43-71.

<sup>12</sup>A comparison of the Census figures with the Labour Bureau data on employment in factories, suggests that while total manufacturing employment rose from 9.6 to 13.0 million between 1951 and 1961, factory employment rose from 2.9 to 3.8 million.



TABLE 6

*Trends in the Industrial Distribution of the Working Force (Percentages) in the Indian States, 1911—1961 by Broad Sectors (Males only)*

			1911	1921	1931	1951	1961
Andhra Pradesh	..	A	69.4	70.7	66.0	70.0	72.2
		M	11.5	9.7	9.5	11.0	10.7
		S	17.2	17.7	21.7	16.4	14.6
Assam	..	A	87.8	88.8	87.4	82.2	85.5
		M	1.7	1.7	2.2	4.1	3.5
		S	8.9	8.0	8.3	12.9	9.2
Bihar	..	A	84.1	86.4	87.0	85.6	79.5
		M	4.8	4.3	4.2	3.5	6.7
		S	10.2	8.5	7.9	8.8	10.9
Gujarat	..	A	65.9	65.4	67.7	62.9	67.3
		M	12.3	12.6	11.1	13.4	12.7
		S	19.8	19.9	18.8	21.9	17.8
Kerala	..	A	65.7	63.0	60.3	57.5	55.0
		M	11.6	13.0	11.1	15.8	14.6
		S	20.6	22.8	25.4	23.9	26.5
Madhya Pradesh	..	A	75.6	78.2	80.1	79.3	78.8
		M	9.2	8.2	7.2	8.0	8.0
		S	13.8	12.7	11.5	11.1	10.4
Madras	..	A	73.6	74.1	72.1	63.3	64.5
		M	9.4	8.7	8.9	13.6	13.7
		S	14.2	14.6	16.4	20.6	18.5
Maharashtra	..	A	70.7	69.4	70.0	63.3	64.5
		M	10.4	10.3	10.4	13.8	14.4
		S	17.2	18.4	17.5	20.4	19.5
Mysore	..	A	74.0	72.2	72.6	71.0	73.4
		M	8.2	8.9	7.1	9.7	9.7
		S	15.4	16.8	17.1	16.0	13.7
Orissa	..	A	81.1	82.2	83.3	81.2	84.2
		M	6.8	6.3	6.0	6.3	5.7
		S	11.4	10.8	9.9	11.5	8.9
Punjab	..	A	63.2	63.8	66.3	68.7	66.6
		M	14.4	14.7	13.4	7.8	11.3
		S	18.1	17.6	17.6	21.9	18.3
Rajasthan	..	A	63.3	65.7	69.1	75.0	78.4
		M	12.3	11.0	10.1	8.1	6.0
		S	22.2	21.4	18.2	14.8	12.8
Uttar Pradesh	..	A	77.2	79.8	78.0	75.4	77.4
		M	8.6	7.8	8.0	9.9	8.2
		S	12.8	11.6	12.9	13.1	12.5
W. Bengal	..	A	68.7	68.7	67.9	57.2	59.5
		M	9.3	10.9	9.8	14.7	15.1
		S	17.9	16.5	18.5	24.7	21.9
India	..	A	73.6	74.4	74.0	71.7	71.7
		M	9.5	9.2	8.9	9.7	10.1
		S	15.0	14.6	15.2	16.4	15.5

NOTE.—The broad sectors used here are: A: Agriculture including allied activities M: Manufacturing; S: Services, i.e., Electricity, gas, etc. trade and commerce, transport, storage and communications and other services.

17. These all-India trends obscure however the different types of changes in the industrial distribution of the working force recorded in different parts of India during the period 1911-61. While in Kerala Madras, Maharashtra and West Bengal there was a shift away from agriculture towards both manufacturing and services, in Rajasthan and Orissa there was shift in the reverse directions; in the remaining States there was no clear trend either way (see Table 6).

18. An analysis of the per capita income data for<sup>13</sup> different States and of the data relating to the industrial distribution of their working force reveals also some interesting features.

19. In 1961, there were six States with per capita income around or above the Indian level<sup>13</sup> (Gujarat, Kerala, Madras, Maharashtra, Punjab and West Bengal). These States (which we shall call Group A States) were characterised by a relatively low share of agriculture and relatively high shares of manufacturing and services in their work force. On the other hand, the remaining seven States had per capita income below the Indian average (Andhra Pradesh, Bihar, Madhya Pradesh, Mysore, Orissa, Rajasthan and Uttar Pradesh). These states (which we shall call Group B States) were characterised by relatively high shares of agriculture and low shares of manufacturing and services.

20. It is also evident that generally wage paid employment is more extensive in States with high per capita income than in those with relatively low per capita income (see Table 7).<sup>14</sup>

The two striking exceptions to this rule are Punjab and Bihar.

TABLE 7

*Employees as a Percentage of the Working Force, 1961 for Total, Rural, Urban Areas by States (Male Workers only)*

	Total	Rural	Urban
<b>Group A States—</b>			
Maharashtra ..	42.1	32.3	65.7
West Bengal ..	44.5	33.9	72.0
Punjab ..	24.0	18.0	47.9
Gujarat ..	30.3	24.8	55.5
Madras ..	38.1	27.6	54.5
Kerala ..	38.1	36.4	51.6
India ..	29.7	23.9	57.2
<b>Group B States—</b>			
Mysore ..	29.2	22.6	55.4
Uttar Pradesh ..	19.3	15.2	43.5
Andhra Pradesh ..	34.6	31.9	50.1
Madhya Pradesh ..	25.3	21.0	51.7
Orissa ..	24.2	21.9	56.9
Rajasthan ..	14.3	8.9	48.6
Bihar ..	31.3	29.3	53.5

21. The impact of rising levels of income on the nature and characteristics of employment and unemployment is however likely to be very complex. For instance, when labour-intensive industries processing agricultural products develop alongside commercialisation of agriculture in areas where there is considerable pressure of population on land, an employment pattern could emerge in which non-agricultural employment accounts for a high share of the working force and wage employment for a high share of total employment. The best example is Kerala where the share of agriculture in the working force (61.7 per cent) is lower than that for all-India, rural and urban sectors taken together (71.7 per cent): wage employment in the rural sector in Kerala is also higher than elsewhere in India. The very small size of the average operational holding in Kerala (see Table 8) makes it necessary for a good part of the rural working force to seek non-agricultural resources of employment.

<sup>13</sup> We have used the 1961 per capita income estimates for the Indian States of the National Council of Applied Economic Research presented in *Distribution of National Income by States, 1960-61*, New Delhi, 1963. For detailed results for 1961 on the relationship between per capita income and the industrial distribution see J. Krishnamurti: "The Industrial Distribution of the Working Force and Levels of Development 1961: An Analysis of the Indian States," Working Paper 25, DSE.

<sup>14</sup> We have obtained employee/workers ratios for each State from 1961 Census data on class of worker. See Census of India 1961, Vol. I, India, Part II-B (i) Tables, BIV. The results of this study are as yet unpublished.

TABLE 8

*Household Average Operational Holdings, Size and Percentages of Employees in the Working Force Rural/Males for India and Selected States, 1961*

State	Household Operational Holding Size (in acres) 1961	Percentage of employees in the total working force (Rural males) 1961
<b>Group A States—</b>		
Maharashtra	12.87	32.3
Punjab	13.78	18.0
West Bengal	4.10	33.9
Gujarat	12.53	24.8
Madras	4.58	27.6
Kerala	1.83	36.4
India	7.39	23.9
<b>Group B States—</b>		
Mysore	10.48	22.6
Uttar Pradesh	5.27	15.2
Andhra Pradesh	8.04	31.9
Madhya Pradesh	10.60	21.0
Orissa	5.19	21.9
Rajasthan	16.01	8.9
Bihar	4.80	29.3

SOURCE:—1961 Census data.

22. At the other extreme is the Punjab, a State with a much higher per capita income than Kerala. Punjab's prosperity is not only based on agriculture but on holdings of relatively large size. Hence, though a relatively large proportion of Punjab's working force is engaged in non-agricultural activities (including industries processing agricultural products) a high proportion is in household or small scale enterprises with very limited wage employment. In fact, unlike Kerala, Punjab has a rather low share of wage labour in her working force. Presumably the family labour of cultivator households is mainly occupied in cultivation on family farms and there is very little surplus labour in agriculture. The Punjab is thus a State that is "advanced" in terms of the industrial distribution of its working force and yet does not have a high degree of wage employment.

23. Another possibility is that while improvements in transport might lead to the destruction of local industries protected from external competition, agriculture might grow through extension of acreage, irrigation and/or multiple cropping. This could lead to an increase in the relative share of agriculture in the total work force at the expense of manufacturing industry. This is in fact that happened in Rajasthan in the course of this century with the introduction of railways and the increase in area under irrigation multiple cropping in agriculture. The development of agriculture and industry could thus lead to decline in employment in manufacturing and increase in employment in agriculture.

24. The direction and magnitude of the change in the demand for labour accompanying agricultural development would depend very much on the sources of growth, more particularly on the extent to which it is derived from extension and/or intensiveness of land used and on the degree to which the technology adopted involves complementary inputs of labour or its substitution.

25. It would nevertheless be broadly correct to assume that under conditions of acute population pressure on land, economic development will be characterised generally by shifts in the working force from agriculture towards non-agriculture, and from rural to urban areas. While this may be accompanied by increasing employment opportunities at each stage, the process of commercialisation is itself likely to convert latent unemployment within household enterprises into open unemployment among those seeking wage employment. In fact, to the extent that greater employment opportunities are sought to be created through a transformation of the pattern of industrial distribution of the working force, such a transformation could make unemployment more open and therefore appear more acute. Even now, data on open unemployment would suggest that it is more severe in urban than in rural areas ; in large cities than in the smaller towns ; in States with high rather than low per capita income ; and in commercialised areas with considerable wage employment than in relatively less commercialised areas with little wage employment. As development proceeds one would expect an accentuation of this apparent contradiction between the needed transformation of an under developed economy and growth in the numbers of the openly unemployed.





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# ERRATA

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